

=> file reg

FILE 'REGISTRY' ENTERED AT 09:45:54 ON 05 JUL 2001
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STRUCTURE FILE UPDATES: 4 JUL 2001 HIGHEST RN 344549-73-1
DICTIONARY FILE UPDATES: 4 JUL 2001 HIGHEST RN 344549-73-1

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(FILE 'HOME' ENTERED AT 09:37:40 ON 05 JUL 2001)

FILE 'REGISTRY' ENTERED AT 09:38:14 ON 05 JUL 2001

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E WAY 124/CN
1 S E6
E RAP.PA/CN
L2 1 S E2
E GP11044/CN
E GP 11044/CN
E RAP-PA/CN
E GPI 1044/CN
L3 1 S E3
SET COST OFF

FILE 'REGISTRY' ENTERED AT 09:45:54 ON 05 JUL 2001

=> d 11;d 12; d 13

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 149438-31-3 REGISTRY
CN 27,31-Epoxy-5,36-etheno-1H,5H-pyrido[2,1-c][1,2,4]triazolo[1,2-q][1,4,17,18]oxatriazacyclohentriacontine-1,3,9,15,19,25,26(2H,6H,10H,19aH)-heptone, 7,8,11,14,16,17,20,21,22,23,27,28,29,30,31,32,33,36-octadecahydro-11,27-dihydroxy-17-[(1R)-2-[(1S,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethyl]-10,33-dimethoxy-6,8,12,14,28,34-hexamethyl-2-phenyl-, (6S,8R,10R,11R,12E,14R,17S,19aS,27R,28R,31S,33S,34E)-(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

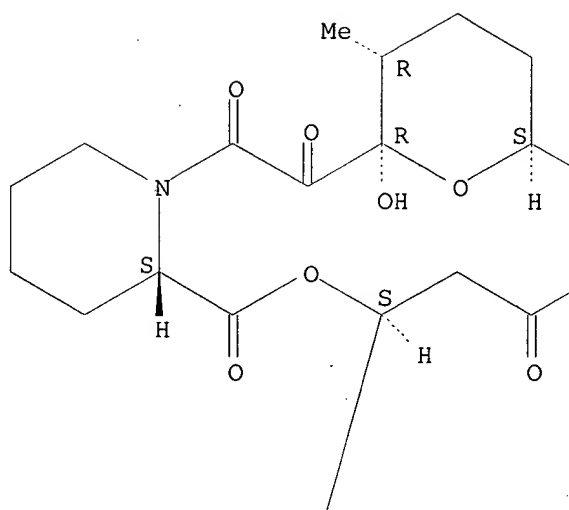
CN 27,31-Epoxy-5,36-etheno-1H,5H-pyrido[2,1-c][1,2,4]triazolo[1,2-q][1,4,17,18]oxatriazacyclohentriacontine-1,3,9,15,19,25,26(2H,6H,10H,19aH)-heptone, 7,8,11,14,16,17,20,21,22,23,27,28,29,30,31,32,33,36-octadecahydro-11,27-dihydroxy-17-[2-(4-hydroxy-3-methoxycyclohexyl)-1-methylethyl]-10,33-dimethoxy-6,8,12,14,28,34-hexamethyl-2-phenyl-, [6S-[6R*,8S*,10S*,11S*,12E,14S*,17R*[S*(1R*,3S*,4S*)],19aR*,27S*,28S*,31R*,33R*,34E]]-[partial]-

OTHER NAMES:

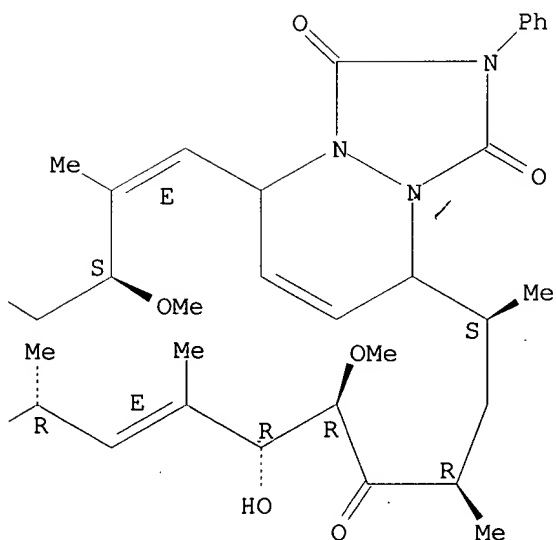
CN WAY 124466
FS STEREOSEARCH
MF C59 H84 N4 O15
SR CA
LC STN Files: CA, CANCERLIT, CAPLUS, MEDLINE, TOXLINE, TOXLIT, USPATFULL
KATHLEEN FULLER EIC1700 308-4290

Absolute stereochemistry.
Double bond geometry as described by E or Z.
Currently available stereo shown.

PAGE 1-A

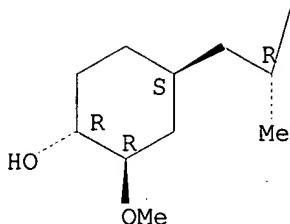


PAGE 1-B



5141 218

PAGE 2-A



11 REFERENCES IN FILE CA (1967 TO DATE)
 11 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
 RN 165047-17-6 REGISTRY
 CN Glycine, (2S)-1-[oxo[(2R,3R,6S)-tetrahydro-2-hydroxy-6-[(2S,3S)-3-hydroxy-2-methoxybutyl]-3-methyl-2H-pyran-2-yl]acetyl]-2-piperidinecarbonyl-(.alpha.R)-.alpha.-aminobenzenebutanoylglycyl-N-methyl-, (4.fwdarw.16)-lactone (9CI) (CA INDEX NAME)

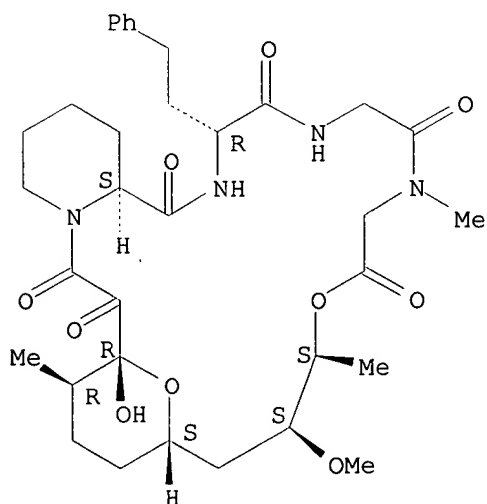
OTHER CA INDEX NAMES:

CN Glycine, N-[[[1-[oxo[tetrahydro-2-hydroxy-6-(3-hydroxy-2-methoxybutyl)-3-methyl-2H-pyran-2-yl]acetyl]-2-piperidinyl]carbonyl]-4-phenyl-D-2-aminobutanoylglycyl-N-methyl-, .tau.-lactone, [2R-[2.alpha.,2(S*),3.alpha.,6.beta.(2S*,3S*)]]-

OTHER NAMES:

CN **Rap Pa**
 FS STEREOSEARCH
 MF C34 H48 N4 O10
 SR CA
 LC STN Files: CA, CAPLUS, TOXLIT, USPATFULL

Absolute stereochemistry.

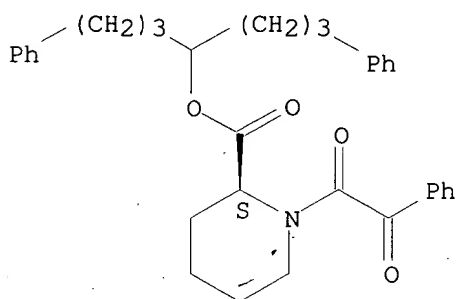


5/18/324

7 REFERENCES IN FILE CA (1967 TO DATE)
 7 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
 RN 190444-03-2 REGISTRY
 CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-phenyl-1-(3-phenylpropyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-phenyl-1-(3-phenylpropyl)butyl ester, (S)-
 OTHER NAMES:
 CN **GPI 1044**
 FS STEREOSEARCH
 MF C33 H37 N O4
 SR CA
 LC STN Files: CA, CAPLUS, TOXLIT, USPATFULL

Absolute stereochemistry.



4 REFERENCES IN FILE CA (1967 TO DATE)
 4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 09:46:57 ON 05 JUL 2001
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FILE COVERS 1947 - 5 Jul 2001 VOL 135 ISS 2
 FILE LAST UPDATED: 4 Jul 2001 (20010704/ED)

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This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

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=> s 11 or 12 or 13

11 L1

7 L2

4 L3

L4 18 L1 OR L2 OR L3

=> s 14 and hair

37716 HAIR

L5 4 L4 AND HAIR

=> d 15 all 1-4 hitstr

L5 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2001 ACS

AN 2001:131200 HCAPLUS

DN 134:168380

TI Small molecule pipecolic acid derivative **hair** growth compositions and uses

IN Steiner, Joseph P.; Hamilton, Gregory S.

PA GPI NIL Holdings, Inc., USA

SO U.S., 17 pp., Cont.-in-part of U. S. 5,945,441.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K031-55

NCL 514211000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 62

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6191125	B1	20010220	US 1998-89373	19980603
	US 5945441	A	19990831	US 1997-869426	19970604
	ZA 9804621	A	19981204	ZA 1998-4621	19980529
	ZA 9804778	A	19981204	ZA 1998-4778	19980603
	ZA 9804783	A	19981204	ZA 1998-4783	19980603
	US 6239164	B1	20010529	US 1999-369860	19990809
PRAI	US 1997-869426	A2	19970604		

OS MARPAT 134:168380

AB This invention relates to pharmaceutical compns. and methods for treating alopecia and promoting **hair** growth using pipecolic acid derivs. Efficacy of GPI 1044 (a pipecolic acid deriv.) in promoting **hair** growth in mice was shown. A lotion contained 95% ethanol 80.0, a pipecolic acid deriv. 10.0, .alpha.-Tocopherol acetate 0.01, ethylene oxide (40 mol) adducts of hardened castor oil 0.5, purified water 9.0, perfume and dye q.s. 100%.

ST pipecolic acid deriv **hair** growth promoter

IT. Proteins, specific or class

RL: BSU (Biological study, unclassified); BIOL (Biological study) (FKBP (FK 506-binding protein); small mol. pipecolic acid deriv. **hair** growth compns. and uses)

IT Alopecia

(areata; small mol. pipecolic acid deriv. **hair** growth compns. and uses)

IT Drug delivery systems

(emulsions; small mol. pipecolic acid deriv. **hair** growth compns. and uses)

IT **Hair** preparations

(growth stimulants; small mol. pipecolic acid deriv. **hair** growth compns. and uses)

IT Drug delivery systems

(lotions; small mol. pipecolic acid deriv. **hair** growth

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compns. and uses)

IT Alopecia
(male pattern; small mol. pipecolic acid deriv. **hair** growth compns. and uses)

IT Drug delivery systems
(ointments, creams; small mol. pipecolic acid deriv. **hair** growth compns. and uses)

IT Alopecia
Shampoos
(small mol. pipecolic acid deriv. **hair** growth compns. and uses)

IT Immunophilins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(small mol. pipecolic acid deriv. **hair** growth compns. and uses)

IT 535-75-1D, Pipecolic acid, derivs.
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(small mol. pipecolic acid deriv. **hair** growth compns. and uses)

IT 104987-11-3, Fk506 186834-77-5, GPI 1102 186834-82-2, GPI 1116
190444-03-2, GPI 1044 212607-81-3, GPI 1206
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(small mol. pipecolic acid deriv. **hair** growth compns. and uses)

RE.CNT 77

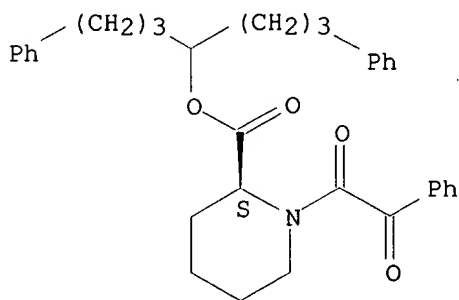
RE

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 IT 190444-03-2, GPI 1044
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (small mol. pipecolic acid deriv. hair growth compns. and
 uses)
 RN 190444-03-2 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-phenyl-1-(3-
 phenylpropyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2001 ACS
 AN 2001:111510 HCAPLUS
 DN 134:168053
 TI Pipecolic acid derivatives for **hair** growth compositions and uses
 IN Steiner, Joseph P.; Hamilton, Gregory S.
 PA Gpi Nil Holdings, Inc., USA
 SO U.S., 29 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM A61K031-44
 NCL 514291000
 CC 62-3 (Essential Oils and Cosmetics)
 Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6187784	B1	20010213	US 1998-89376	19980603
AB	This invention relates to compns. and methods for treating alopecia and promoting hair growth using pipecolic acid derivs. Thus a lotion contained a pipecolic acid deriv. 0.05, hinokitiol 0.01, ethoxylated castor oil 0.5, water 19.0, perfume and dye qs and EtOH to 80.0%.				
ST	pipecolic acid hair growth; alopecia pipecolic acid hair				
IT	Proteins, specific or class				
	RL: BSU (Biological study, unclassified); BIOL (Biological study) (FKBP-12 (FK 506-binding protein, 12,000-mol.-wt.); pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations (creams; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations (emulsions; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations (growth stimulants; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations (lotions; pipecolic acid derivs. for hair growth compns.)				
IT	Alopecia				
	Shampoos (pipecolic acid derivs. for hair growth compns.)				
IT	Immunophilins				
	RL: BSU (Biological study, unclassified); BIOL (Biological study) (pipecolic acid derivs. for hair growth compns.)				
IT	53123-88-9, Rapamycin	141084-63-1	147438-30-0	147438-31-1	
	148493-28-1	149438-31-3, Way	124466	152754-34-2	152754-35-3
	152754-36-4	152754-37-5	152754-38-6	152754-39-7	152754-40-0
	152754-41-1	152754-42-2	153011-31-5, SLB 506	155255-24-6	
	155255-27-9	155255-28-0	155255-29-1	155668-46-5	155668-47-6
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	157757-23-8	165047-17-6, Rap Pa	186834-62-8	186834-63-9	
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	259225-63-3	259225-69-9	259225-71-3	325685-52-7	
	RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pipecolic acid derivs. for hair growth compns.)				

RE.CNT 231

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- IT 149438-31-3, Way 124466 165047-17-6, Rap Pa
 RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (pipecolic acid derivs. for hair growth compns.)
- RN 149438-31-3 HCAPLUS
 CN 27,31-Epoxy-5,36-etheno-1H,5H-pyrido[2,1-c][1,2,4]triazolo[1,2-q][1,4,17,18]oxatriazacyclohentriacontine-1,3,9,15,19,25,26(2H,6H,10H,19aH)-heptone, 7,8,11,14,16,17,20,21,22,23,27,28,29,30,31,32,33,36-octadecahydro-11,27-dihydroxy-17-[(1R)-2-[(1S,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethyl]-10,33-dimethoxy-6,8,12,14,28,34-hexamethyl-2-phenyl-, (6S,8R,10R,11R,12E,14R,17S,19aS,27R,28R,31S,33S,34E)-(9CI) (CA INDEX NAME)

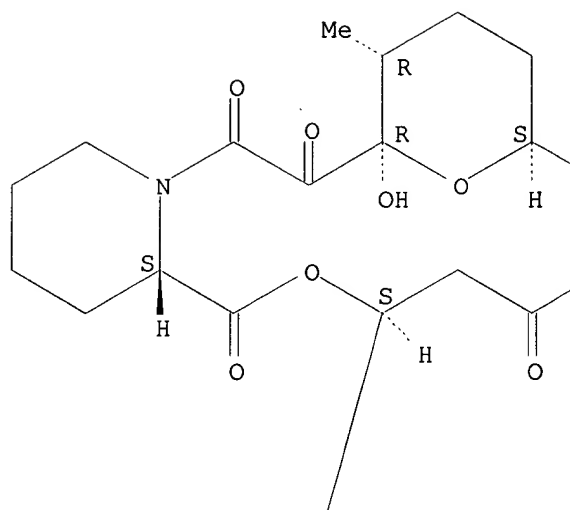
Absolute stereochemistry.

Double bond geometry as described by E or Z.

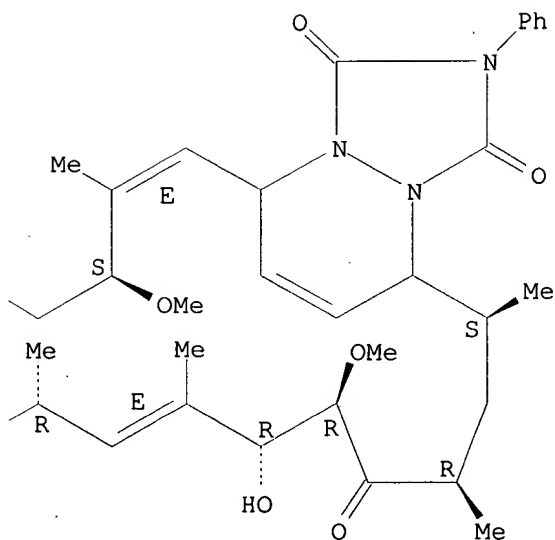
KATHLEEN FULLER EIC1700 308-4290

Currently available stereo shown.

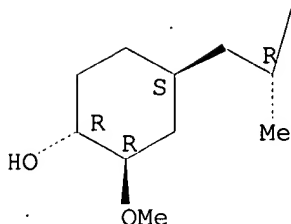
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PAGE 1-B



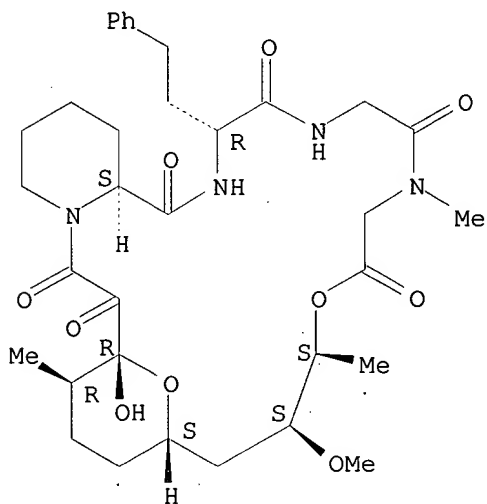
PAGE 2-A



RN 165047-17-6 HCAPLUS

CN Glycine, (2S)-1-[oxo[(2R,3R,6S)-tetrahydro-2-hydroxy-6-[(2S,3S)-3-hydroxy-2-methoxybutyl]-3-methyl-2H-pyran-2-yl]acetyl]-2-piperidinecarbonyl-(.alpha.R)-.alpha.-aminobenzenebutanoylglycyl-N-methyl-, (4.fwdarw.16)-lactone (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:783911 HCAPLUS

DN 132:26640

TI Small molecule pipecolic acid derivative **hair** growth compositions and uses

IN Hamilton, Gregory S.; Steiner, Joseph P.PA Guilford Pharmaceuticals Inc., USA

SO PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K007-48

ICS A61K031-445

CC 62-3 (Essential Oils and Cosmetics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9962491	A1	19991209	WO 1998-US11264	19980603

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

KATHLEEN FULLER EIC1700 308-4290

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9877176 A1 19991220 AU 1998-77176 19980603
 EP 1083874 A1 20010321 EP 1998-925163 19980603

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI WO 1998-US11264 A 19980603
 OS MARPAT 132:26640

AB This invention relates to topical compns. and methods for treating alopecia and promoting **hair** growth using pipecolic acid derivs. For example, 4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate and 1-phenethyl-3-phenylpropyl-1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate showed **hair** revitalizing properties in C57 black mice.

ST piperidinecarboxylate deriv alopecia treatment; **hair** growth promoter pipecolate deriv

IT Immunophilins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (affinity to; pipecolic acid derivs. for **hair** growth compns.)

IT **Hair** preparations (creams; pipecolic acid derivs. for **hair** growth compns.)

IT **Hair** preparations (emulsions; pipecolic acid derivs. for **hair** growth compns.)

IT **Hair** preparations (growth stimulants; pipecolic acid derivs. for **hair** growth compns.)

IT **Hair** preparations (lotions; pipecolic acid derivs. for **hair** growth compns.)

IT Alopecia

Shampoos (pipecolic acid derivs. for **hair** growth compns.)

IT 141083-86-5 141084-02-8 141084-12-0 141084-13-1 141084-14-2
 141084-34-6 141084-35-7 141084-39-1 141084-41-5 141084-42-6
 141084-63-1 141097-91-8 186834-77-5 186834-82-2 188614-85-9
 188614-86-0 **190444-03-2**, GPI 1044

RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pipecolic acid derivs. for **hair** growth compns.)

RE.CNT 2

RE

(1) Fujisawa Pharm Co, Ltd; EP 0423714 A 1991 HCAPLUS

(2) Guilford Pharm Inc; WO 9813343 A 1998 HCAPLUS

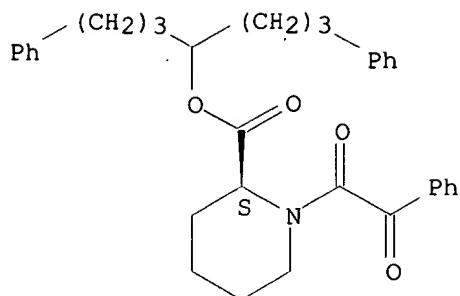
IT **190444-03-2**, GPI 1044

RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pipecolic acid derivs. for **hair** growth compns.)

RN 190444-03-2 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-phenyl-1-(3-phenylpropyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2001 ACS
 AN 1999:783903 HCAPLUS
 DN 132:26633
 TI Pipecolic acid derivatives for **hair** growth compositions
 IN Hamilton, Gregory S.; Steiner, Joseph P.
 PA Guilford Pharmaceuticals, Inc., USA
 SO PCT Int. Appl., 103 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K007-48
 ICS A61K031-50; A61K031-435; A61K031-445; C07K005-02; C07K005-08
 CC 62-3 (Essential Oils and Cosmetics)
 Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9962483	A1	19991209	WO 1998-US11242	19980603
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9877167	A1	19991220	AU 1998-77167	19980603
	EP 1083872	A1	20010321	EP 1998-925152	19980603
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
PRAI	WO 1998-US11242	A	19980603		
AB	This invention relates to pharmaceutical compns. and methods for treating alopecia and promoting hair growth using pipecolic acid derivs. Thus, a hair lotion contained 95% EtOH, a pipecolic acid deriv. such as 4-(4-methoxyphenyl)butyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate 10.0, .alpha.-tocopherol acetate 0.01, ethoxylated hardened castor oil 0.5, and water 9.0%, and perfume and dye.				
ST	pipecolic acid deriv hair growth				
IT	Hair preparations (creams; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations (emulsions; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations (growth stimulants; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations (lotions; pipecolic acid derivs. for hair growth compns.)				
IT	Alopecia Immunosuppressants				

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Shampoos

(pipecolic acid derivs. for hair growth compns.)

IT Immunophilins

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(pipecolic acid derivs. for hair growth compns.)

IT 535-75-1D, Pipecolic acid, derivs. 53123-88-9, Rapamycin 141084-63-1

145021-24-5 145021-25-6 145021-36-9 145021-37-0 145021-38-1

145021-39-2 145021-43-8 145021-46-1 145021-47-2 145037-51-0

147438-29-7 149438-31-3, Way 124466 152754-34-2 152754-35-3

152754-36-4 152754-37-5 152754-38-6 152754-39-7 152754-40-0

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155255-31-5 155255-32-6 155367-80-9 155399-01-2 155399-02-3

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155668-52-3 155668-53-4 155668-54-5 155668-55-6 155668-56-7

155668-57-8 155668-58-9 155668-59-0 155668-61-4 155668-63-6

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252002-91-8 252002-96-3 252002-98-5 252002-99-6 252003-00-2

252003-01-3 252003-02-4

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(pipecolic acid derivs. for hair growth compns.)

RE.CNT 6

RE

(1) Armistead, D; US 5620971 A 1997 HCAPLUS

(2) Astra Aktiebolaget; WO 9611943 A 1996 HCAPLUS

(3) Fujisawa Pharm Co Ltd; EP 0423714 A 1987 HCAPLUS

(4) Guilford Pharm; WO 9813343 A 1998 HCAPLUS

(5) Nelson, F; US 5385908 A 1995 HCAPLUS

(6) Skotnicki, J; US 5252579 A 1993 HCAPLUS

IT 149438-31-3, Way 124466

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(pipecolic acid derivs. for hair growth compns.)

RN 149438-31-3 HCAPLUS

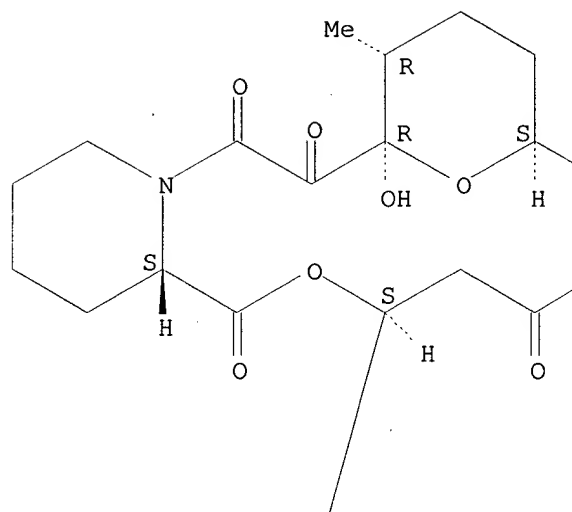
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Absolute stereochemistry.

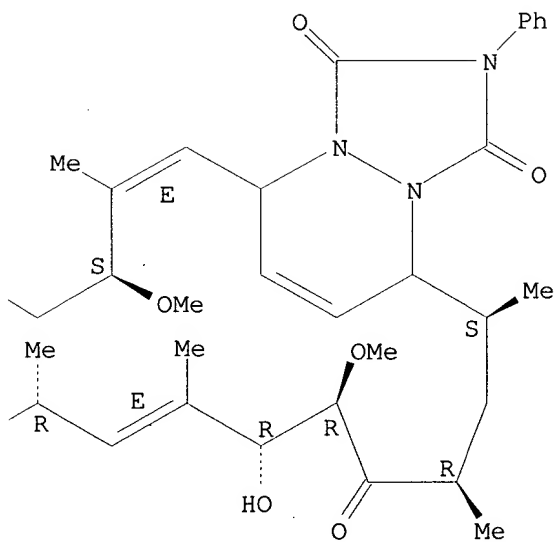
Double bond geometry as described by E or Z.

Currently available stereo shown.

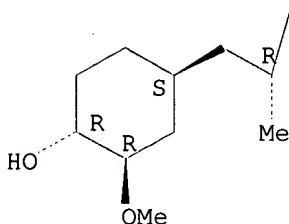
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PAGE 1-B



PAGE 2-A



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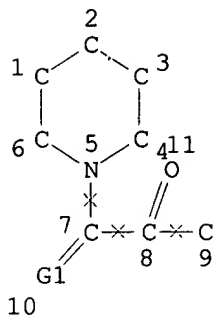
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L6

STR

KATHLEEN FULLER EIC1700 308-4290



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NODE ATTRIBUTES:

NSPEC IS RC AT 7

NSPEC IS RC AT 8

NSPEC IS R AT 9

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

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NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L10 5607 SEA FILE=REGISTRY SSS FUL L6

L11 4333 SEA FILE=HCAPLUS ABB=ON L10

L15 20 SEA FILE=HCAPLUS ABB=ON L11(L) (HAIR OR ?ALOPEC?)

=> d l15 1-20 all hitstr

L15 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 2001:131200 HCAPLUS

DN 134:168380

TI Small molecule pipecolic acid derivative hair growth compositions and uses

IN Steiner, Joseph P.; Hamilton, Gregory S.

PA GPI NIL Holdings, Inc., USA

SO U.S., 17 pp., Cont.-in-part of U. S. 5,945,441.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K031-55

NCL 514211000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 62

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6191125	B1	20010220	US 1998-89373	19980603
	US 5945441	A	19990831	US 1997-869426	19970604
	ZA 9804621	A	19981204	ZA 1998-4621	19980529
	ZA 9804778	A	19981204	ZA 1998-4778	19980603
	ZA 9804783	A	19981204	ZA 1998-4783	19980603
	US 6239164	B1	20010529	US 1999-369860	19990809
PRAI	US 1997-869426	A2	19970604		

OS MARPAT 134:168380

AB This invention relates to pharmaceutical compns. and methods for treating alopecia and promoting hair growth using pipecolic acid derivs. Efficacy of GPI 1044 (a pipecolic acid deriv.) in promoting hair growth in mice was shown. A lotion contained 95% ethanol 80.0, a pipecolic acid deriv. 10.0, .alpha.-Tocopherol acetate 0.01, ethylene oxide (40 mol) adducts of

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5,607 structures from this query. Query covers compounds in claim 20 and if the compounds are used for hair they would show up in the CA references.



hardened castor oil 0.5, purified water 9.0, perfume and dye q.s. 100%.

ST pipecolic acid deriv hair growth promoter

IT Proteins, specific or class
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (FKBP (FK 506-binding protein); small mol. pipecolic acid deriv. hair growth compns. and uses)

IT Alopecia
 (areata; small mol. pipecolic acid deriv. hair growth compns. and uses)

IT Drug delivery systems
 (emulsions; small mol. pipecolic acid deriv. hair growth compns. and uses)

IT Hair preparations
 (growth stimulants; small mol. pipecolic acid deriv. hair growth compns. and uses)

IT Drug delivery systems
 (lotions; small mol. pipecolic acid deriv. hair growth compns. and uses)

IT Alopecia
 (male pattern; small mol. pipecolic acid deriv. hair growth compns. and uses)

IT Drug delivery systems
 (ointments, creams; small mol. pipecolic acid deriv. hair growth compns. and uses)

IT Alopecia
 Shampoos
 (small mol. pipecolic acid deriv. hair growth compns. and uses)

IT Immunophilins
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (small mol. pipecolic acid deriv. hair growth compns. and uses)

IT 535-75-1D, Pipecolic acid, derivs.
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (small mol. pipecolic acid deriv. hair growth compns. and uses)

IT 104987-11-3, Fk506 186834-77-5, GPI 1102 186834-82-2, GPI 1116
 190444-03-2, GPI 1044 212607-81-3, GPI 1206
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (small mol. pipecolic acid deriv. hair growth compns. and uses)

RE.CNT 77

RE

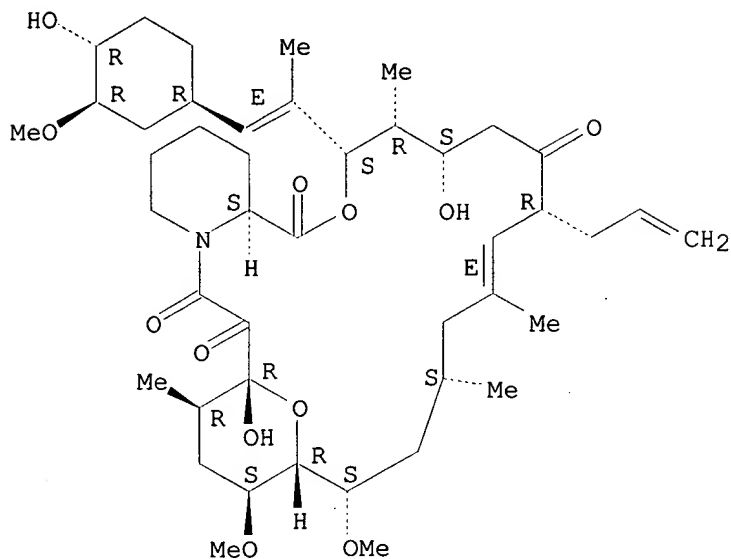
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IT 104987-11-3, Fk506 190444-03-2, GPI 1044
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(small mol. pipecolic acid deriv. hair growth compns. and
uses)
RN 104987-11-3 HCAPLUS
CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-
tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-
dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-
methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-,
KATHLEEN FULLER EIC1700 308-4290

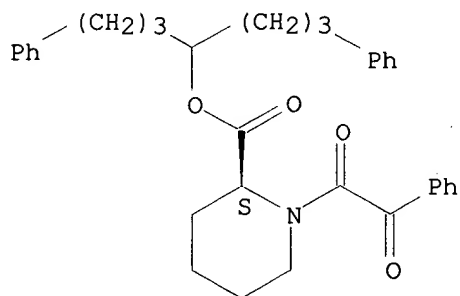
(3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 190444-03-2 HCAPLUS
CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-phenyl-1-(3-phenylpropyl)butyl ester, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2001 ACS
AN 2001:111510 HCAPLUS
DN 134:168053
TI Pipecolic acid derivatives for hair growth compositions and uses
IN Steiner, Joseph P.; Hamilton, Gregory S.
PA Gpi Nil Holdings, Inc., USA
SO U.S., 29 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K031-44
NCL 514291000
CC 62-3 (Essential Oils and Cosmetics)
Section cross-reference(s): 1
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KATHLEEN FULLER EIC1700 308-4290				

PI US 6187784 B1 20010213 US 1998-89376 19980603
 AB This invention relates to compns. and methods for treating alopecia and promoting hair growth using pipecolic acid derivs. Thus a lotion contained a pipecolic acid deriv. 0.05, hinokitiol 0.01, ethoxylated castor oil 0.5, water 19.0, perfume and dye qs and EtOH to 80.0%.
 ST pipecolic acid hair growth; alopecia pipecolic acid hair
 IT Proteins, specific or class
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (FKBP-12 (FK 506-binding protein, 12,000-mol.-wt.); pipecolic acid derivs. for hair growth compns.)
 IT Hair preparations (creams; pipecolic acid derivs. for hair growth compns.)
 IT Hair preparations (emulsions; pipecolic acid derivs. for hair growth compns.)
 IT Hair preparations (growth stimulants; pipecolic acid derivs. for hair growth compns.)
 IT Hair preparations (lotions; pipecolic acid derivs. for hair growth compns.)
 IT Alopecia Shampoos (pipecolic acid derivs. for hair growth compns.)
 IT Immunophilins
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (pipecolic acid derivs. for hair growth compns.)
 IT **53123-88-9, Rapamycin 141084-63-1 147438-30-0 147438-31-1 148493-28-1 149438-31-3, Way**
 124466 152754-34-2 152754-35-3 152754-36-4 152754-37-5
 152754-38-6 152754-39-7 152754-40-0 152754-41-1 **152754-42-2**
153011-31-5, SLB 506 155255-24-6 155255-27-9 155255-28-0 155255-29-1 155668-46-5
155668-47-6 155668-49-8 155668-50-1
155668-51-2 155668-52-3 155668-53-4 155668-54-5
 155668-55-6 155668-56-7 155668-57-8 155668-58-9 155668-59-0
 155668-60-3 155668-86-3 **156038-45-8 157757-22-7**
 157757-23-8 **165047-17-6, Rap Pa 186834-62-8**
186834-63-9 186834-64-0 186834-65-1
 186834-66-2 186834-69-5 186834-70-8 186834-71-9 186834-72-0
 186834-73-1 **186834-74-2 186834-75-3**
186834-76-4 186834-77-5 186834-78-6 186834-79-7
 186834-80-0 186834-81-1 186834-82-2 **186834-83-3**
186834-84-4 186834-85-5 186834-86-6 186834-87-7
 186834-88-8 **186960-09-8 252002-58-7 259225-63-3**
 259225-69-9 **259225-71-3 325685-52-7**
 RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pipecolic acid derivs. for hair growth compns.)

RE.CNT 231

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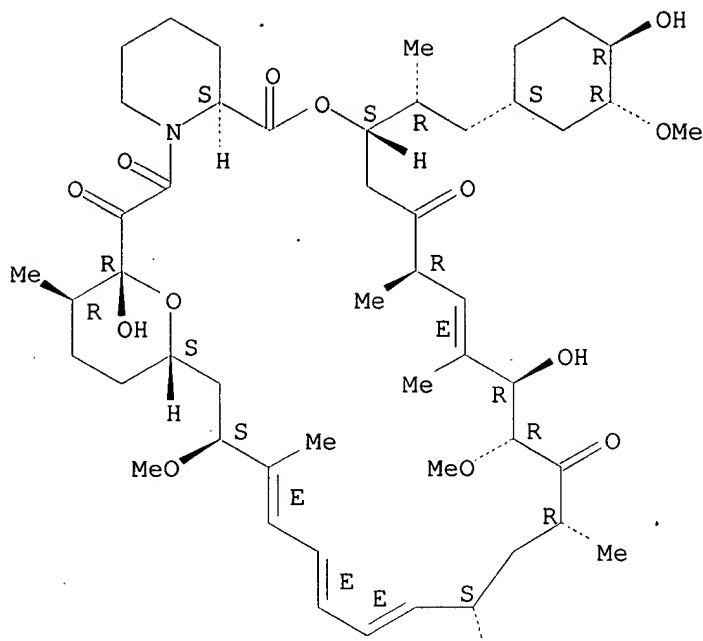
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147438-31-1 148493-28-1 149438-31-3, Way
124466 152754-42-2 153011-31-5, SLB 506
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165047-17-6, Rap Pa 186834-63-9 186834-64-0
186834-65-1 186834-74-2 186834-75-3
186834-76-4 186834-83-3 186834-84-4
186834-85-5 186960-09-8 259225-71-3
RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(pipecolic acid derivs. for hair growth compns.)
- RN 53123-88-9 HCAPLUS
CN Rapamycin (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

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PAGE 2-A

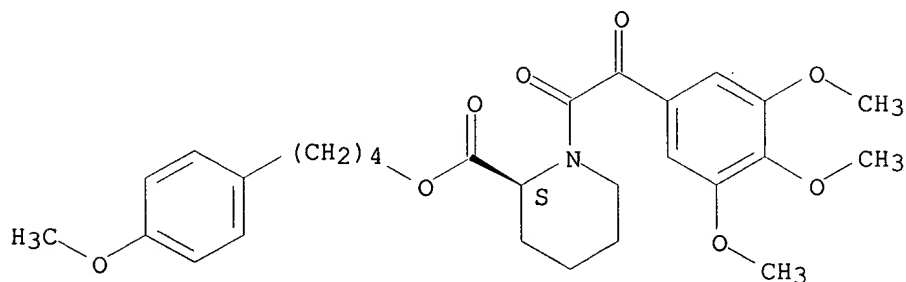
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RN 141084-63-1 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-, 4-(4-methoxyphenyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

*4th compound
in Claim 20*

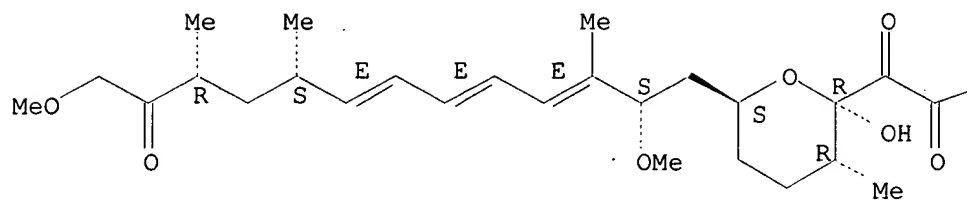


RN 147438-30-0 HCAPLUS

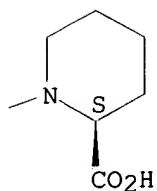
CN 2-Piperidinecarboxylic acid, 1-[[(2R, 3R, 6S)-6-[(2S, 3E, 5E, 7E, 9S, 11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

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PAGE 1-B

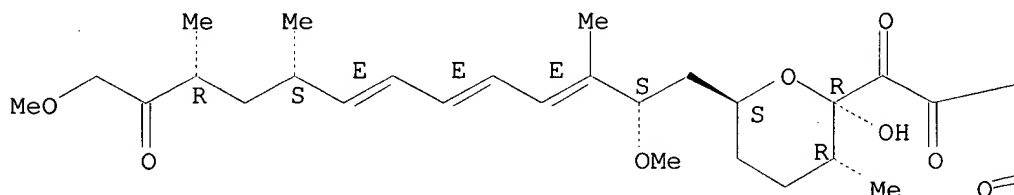


RN 147438-31-1 HCAPLUS

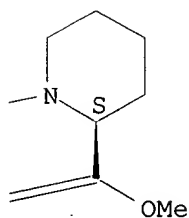
CN 2-Piperidinecarboxylic acid, 1-[[[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-, methyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



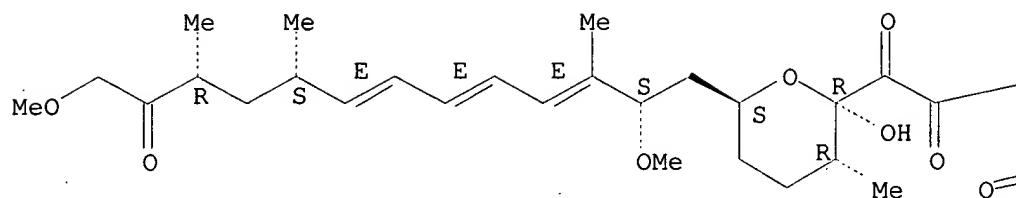
RN 148493-28-1 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[[[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

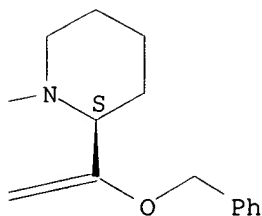
Absolute stereochemistry.
Double bond geometry as shown.

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RN 149438-31-3 HCAPLUS

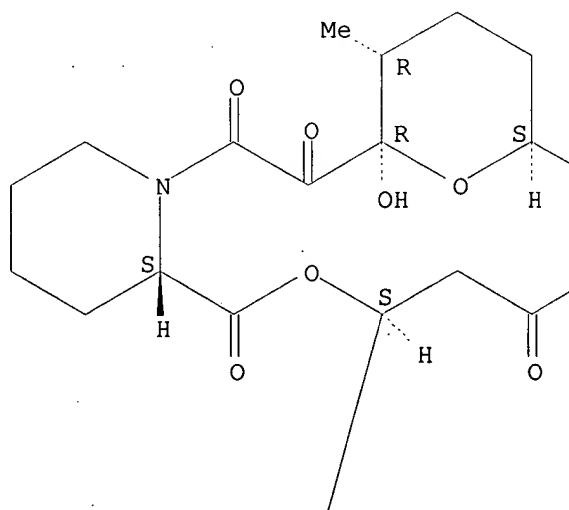
CN 27,31-Epoxy-5,36-etheno-1H,5H-pyrido[2,1-c][1,2,4]triazolo[1,2-q][1,4,17,18]oxatriazacyclohentriacontine-1,3,9,15,19,25,26(2H,6H,10H,19aH)-heptone, 7,8,11,14,16,17,20,21,22,23,27,28,29,30,31,32,33,36-octadecahydro-11,27-dihydroxy-17-[(1R)-2-[(1S,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethyl]-10,33-dimethoxy-6,8,12,14,28,34-hexamethyl-2-phenyl-, (6S,8R,10R,11R,12E,14R,17S,19aS,27R,28R,31S,33S,34E)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

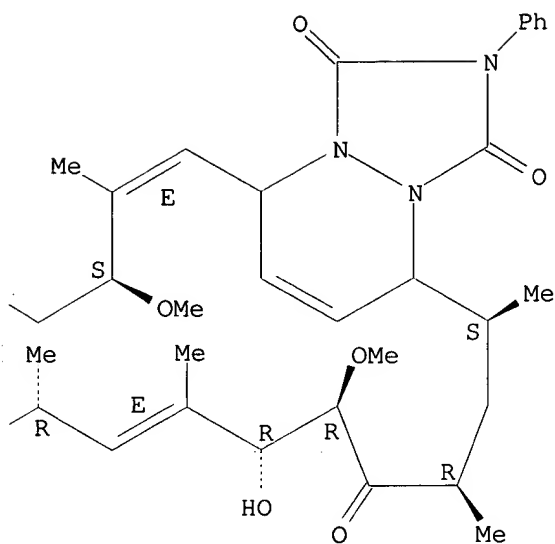
Double bond geometry as described by E or Z.

Currently available stereo shown.

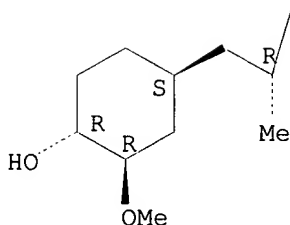
PAGE 1-A



PAGE 1-B

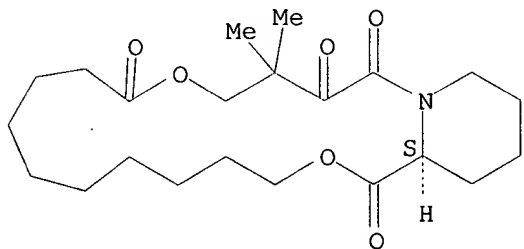


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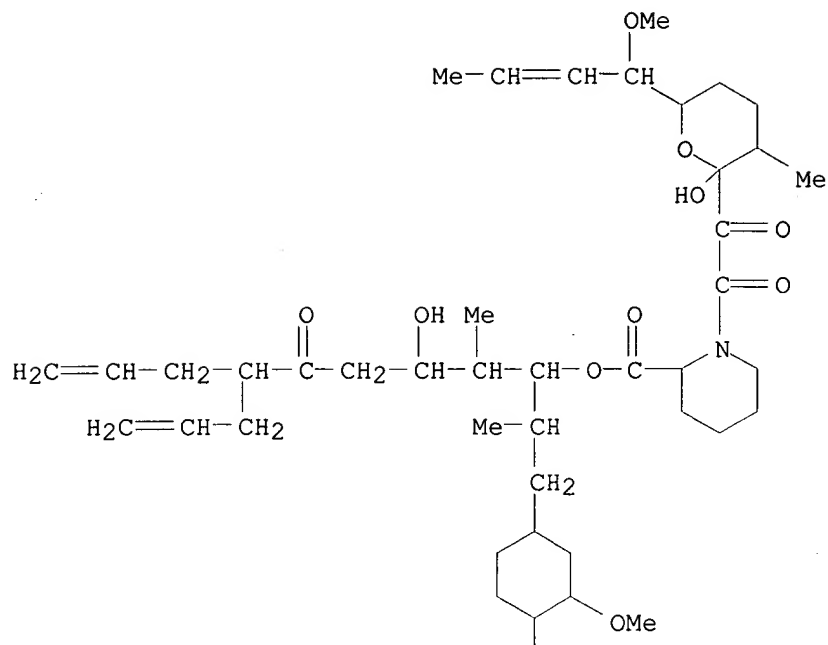
RN 152754-42-2 HCAPLUS
 CN Pyrido[2,1-c][1,9,4]dioxazacyclononadecane-1,12,16,17(3H,19H)-tetrone,
 tetradecahydro-15,15-dimethyl-, (22aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 153011-31-5 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-[oxo[(2R,3R,6S)-tetrahydro-2-hydroxy-6-
 [(1S,2Z)-1-methoxy-2-butenyl]-3-methyl-2H-pyran-2-yl]acetyl]-,
 (1R,2R,3S)-3-hydroxy-1-[(1R)-2-[(1S,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-
 1-methylethyl]-2-methyl-5-oxo-6-(2-propenyl)-8-nonenyl ester, (2S)- (9CI)
 (CA INDEX NAME)

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PAGE 2-A

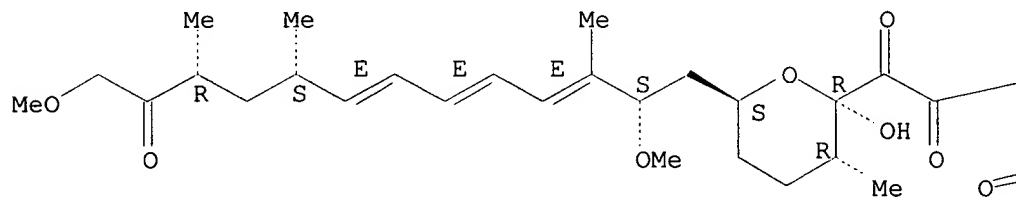


RN 155255-24-6 HCAPLUS

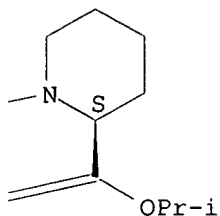
CN 2-Piperidinecarboxylic acid, 1-[[[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-, 1-methylethyl ester, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

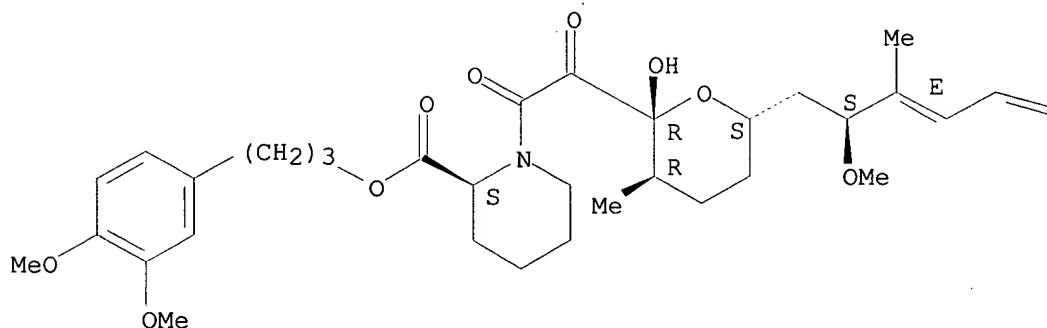


RN 155255-27-9 HCAPLUS

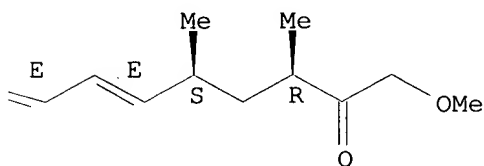
CN 2-Piperidinecarboxylic acid, 1-[[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-, 3-(3,4-dimethoxyphenyl)propyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

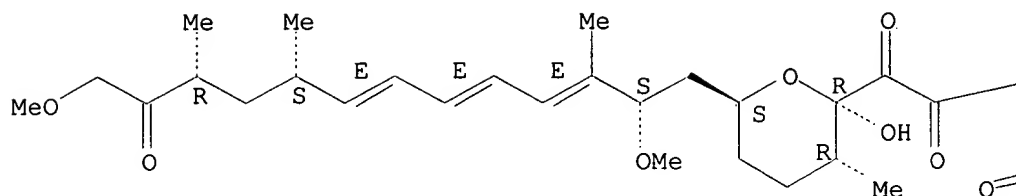


RN 155255-28-0 HCAPLUS

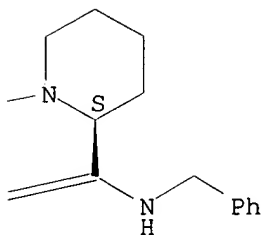
CN 2-Piperidinecarboxamide, 1-[[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-N-(phenylmethyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

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PAGE 1-B

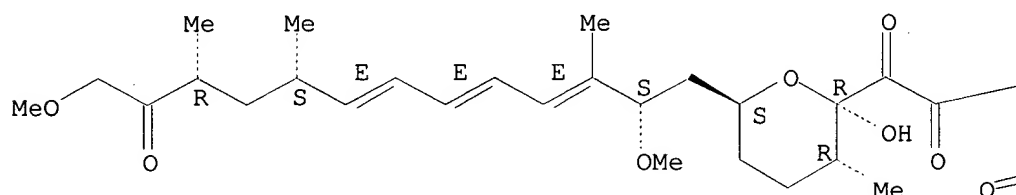


RN 155255-29-1 HCAPLUS

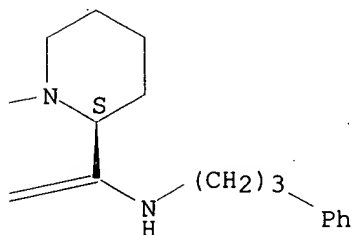
CN 2-Piperidinecarboxamide, 1-[[(2R, 3R, 6S)-6-[(2S, 3E, 5E, 7E, 9S, 11R)-2, 13-dimethoxy-3, 9, 11-trimethyl-12-oxo-3, 5, 7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-N-(3-phenylpropyl)-, (2S)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A

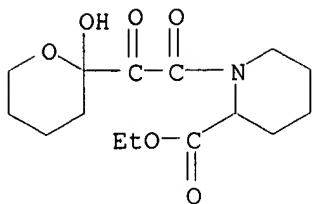


PAGE 1-B



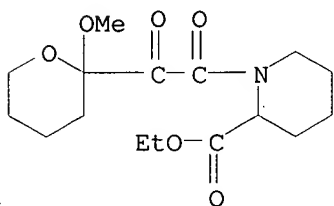
RN 155668-46-5 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(tetrahydro-2-hydroxy-2H-pyran-2-yl)acetyl]-, ethyl ester (9CI) (CA INDEX NAME)



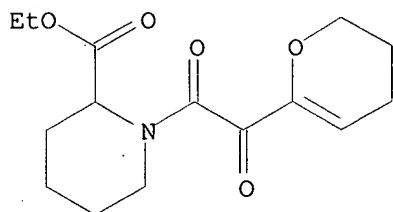
RN 155668-47-6 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(tetrahydro-2-methoxy-2H-pyran-2-yl)acetyl]-, ethyl ester (9CI) (CA INDEX NAME)



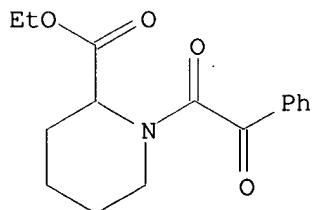
RN 155668-50-1 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[(3,4-dihydro-2H-pyran-6-yl)oxoacetyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 155668-51-2 HCAPLUS

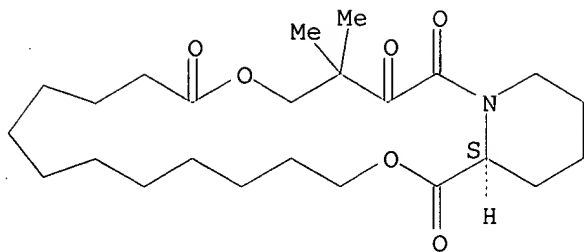
CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, ethyl ester (9CI) (CA INDEX NAME)



RN 156038-45-8 HCAPLUS

CN Pyrido[2,1-c][1,9,4]dioxazacyclohepticosine-1,14,18,19(3H,21H)-tetrone, hexadecahydro-17,17-dimethyl-, (24aS)- (9CI) (CA INDEX NAME)

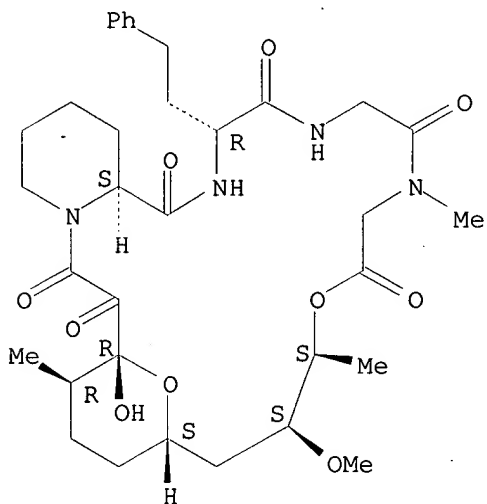
Absolute stereochemistry.



RN 165047-17-6 HCAPLUS

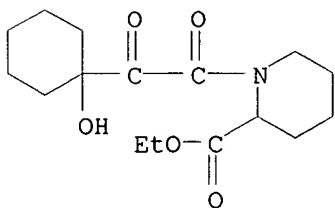
CN Glycine, (2S)-1-[oxo[(2R,3R,6S)-tetrahydro-2-hydroxy-6-[(2S,3S)-3-hydroxy-2-methoxybutyl]-3-methyl-2H-pyran-2-yl]acetyl]-2-piperidinecarbonyl-(.alpha.R)-.alpha.-aminobenzenebutanoylglycyl-N-methyl-, (4.fwdarw.16)-lactone (9CI) (CA INDEX NAME)

Absolute stereochemistry.



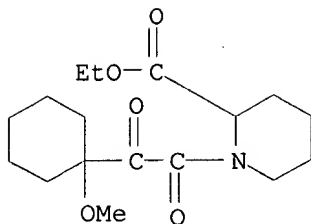
RN 186834-63-9 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[(1-hydroxycyclohexyl)oxoacetyl]-, ethyl ester (9CI) (CA INDEX NAME)

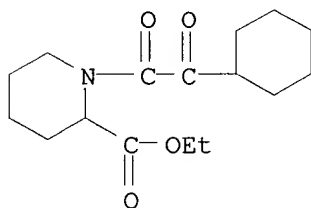


RN 186834-64-0 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[(1-methoxycyclohexyl)oxoacetyl]-, ethyl ester (9CI) (CA INDEX NAME)

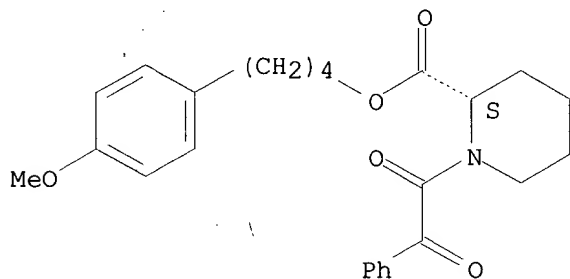


RN 186834-65-1 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(cyclohexyloxyacetyl)-, ethyl ester (9CI)
 (CA INDEX NAME)



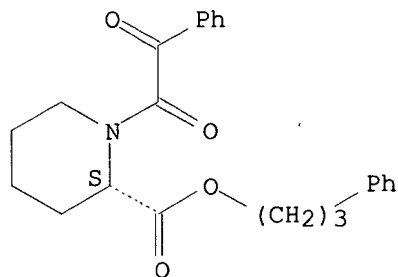
RN 186834-74-2 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-(4-methoxyphenyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186834-75-3 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 3-phenylpropyl ester, (2S)- (9CI) (CA INDEX NAME)

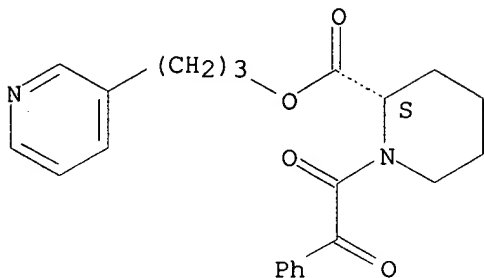
Absolute stereochemistry.



RN 186834-76-4 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 3-(3-pyridinyl)propyl
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ester, (2S)- (9CI) (CA INDEX NAME)

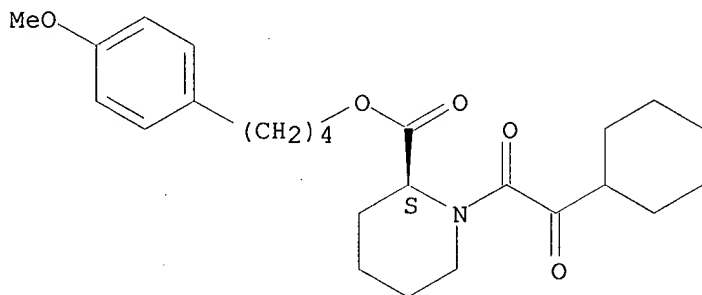
Absolute stereochemistry.



RN 186834-83-3 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(cyclohexyloxoacetyl)-,
4-(4-methoxyphenyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)

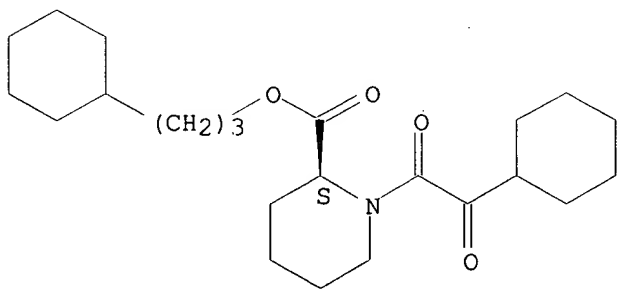
Absolute stereochemistry.



RN 186834-84-4 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(cyclohexyloxoacetyl)-, 3-cyclohexylpropyl
ester, (2S)- (9CI) (CA INDEX NAME)

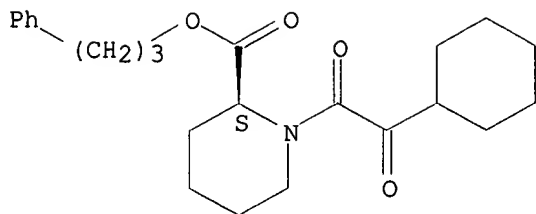
Absolute stereochemistry.



RN 186834-85-5 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(cyclohexyloxoacetyl)-, 3-phenylpropyl
ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

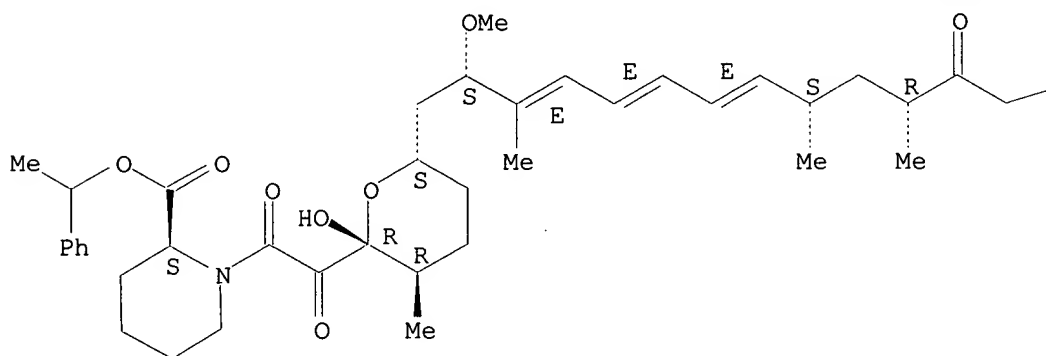


RN 186960-09-8 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-, 1-phenylethyl ester, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

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PAGE 1-B

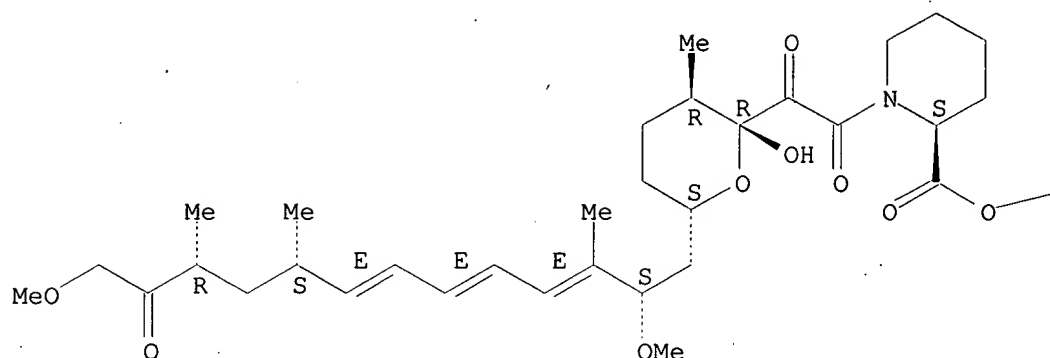
OMe

RN 259225-71-3 HCAPLUS

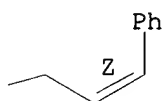
CN 2-Piperidinecarboxylic acid, 1-[[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-, (2Z)-3-phenyl-2-propenyl ester, (2S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L15 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 2000:900207 HCAPLUS

DN 134:61215

TI Lipid and detergent-containing topical formulations comprising vesicle delivery systems

IN Niemiec, Susan M.; Nystrand, Glenn A.; Wang, Jonas C. T.; Ho, Kie L.

PA Johnson & Johnson Consumer Products, Inc., USA

SO Eur. Pat. Appl., 41 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM A61K007-00

ICS A61K007-06; A61K007-48; A61K009-127

CC 62-1 (Essential Oils and Cosmetics)

Section cross-reference(s): 1, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1060732	A2	20001220	EP 2000-304542	20000526
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001019634	A2	20010123	JP 2000-157251	20000526
	CN 1285186	A	20010228	CN 2000-117689	20000526
	BR 2000002285	A	20010123	BR 2000-2285	20000529
PRAI	US 1999-320894	A	19990527		

AB This invention relates to a method for enhancing the transmembrane and/or topical penetration of pharmacol. active substances using a certain vesicle delivery system as an enhancing agent, and an optional detergent, as well as the compns. used therein. Various active agents, such as hair growth agents, hair inhibitor agents, anti-acne agents, depilatory agents, antiaging agents, and depigmentation agents, may be effectively delivered into the skin, hair follicles and sebaceous glands using the compns. of the present invention. For example, liposome delivery systems were prepd. contg. as a lipid phase glyceryl distearate 33.13-40.91, cholesterol

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- 11.04-13.64, polyoxyethylene-10-stearyl ether 29.44-36.36, di(soyoylethyl) hydroxyethylammonium methosulfate 0-19.03, and elubiol 7.36-9.09 parts, and as an aq. phase zinc pyrithione 0-8.57, salicylic acid 0-25.07, and distd. water 74.93-100 parts, resp.
- ST lipid detergent liposome topical; cosmetic hair prepn lipid detergent liposome
- IT Sulfonic acids, biological studies
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (C14-16-1-alkenesulfonic, sodium salts, Bio-Terge AS 40; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Heat-shock proteins
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (HSP 72; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
 (aerosols; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Alcohols, biological studies
 Amides, biological studies
 Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (alkoxylated; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Polyoxyalkylenes, biological studies
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (alkyl group-terminated; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Phenols, biological studies
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (alkyl, alkoxylated; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
 (antiaging; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Hair preparations
 (antidandruff; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Lipids, biological studies
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (cationic and nonionic; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
 (cleansing; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Amides, biological studies
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (coco, N-(hydroxyethyl), Monamid CMA; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
 (creams; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
 (depilatories; topical liposomes contg. lipids and detergents for

- delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Polysiloxanes, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(di-Me, 3-hydroxypropyl Me, ethoxylated propoxylated, Abil B 8852;
topical liposomes contg. lipids and detergents for delivery of active
agents to skin, hair follicles and sebaceous glands)
- IT Polyoxyalkylenes, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(ethers, with alkyl phenols; topical liposomes contg. lipids and
detergents for delivery of active agents to skin, hair follicles and
sebaceous glands)
- IT Fatty acids, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(ethoxylated; topical liposomes contg. lipids and detergents for
delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
(gels; topical liposomes contg. lipids and detergents for delivery of
active agents to skin, hair follicles and sebaceous glands)
- IT Hair preparations
(growth inhibitors; topical liposomes contg. lipids and detergents for
delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Hair preparations
(growth stimulants; topical liposomes contg. lipids and detergents for
delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
Drug delivery systems
(liposomes; topical liposomes contg. lipids and detergents for delivery
of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
(lotions; topical liposomes contg. lipids and detergents for delivery
of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
(mousses; topical liposomes contg. lipids and detergents for delivery
of active agents to skin, hair follicles and sebaceous glands)
- IT Drug delivery systems
(ointments; topical liposomes contg. lipids and detergents for delivery
of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
(patches; topical liposomes contg. lipids and detergents for delivery
of active agents to skin, hair follicles and sebaceous glands)
- IT Biological transport
(permeation, enhancers; topical liposomes contg. lipids and detergents
for delivery of active agents to skin, hair follicles and sebaceous
glands)
- IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(polyhydric, esters, ethoxylated; topical liposomes contg. lipids and
detergents for delivery of active agents to skin, hair follicles and
sebaceous glands)
- IT Protein hydrolyzates
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(silk; topical liposomes contg. lipids and detergents for delivery of
active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
(skin-lightening; topical liposomes contg. lipids and detergents for
delivery of active agents to skin, hair follicles and sebaceous glands)
- IT Cosmetics
(sprays; topical liposomes contg. lipids and detergents for delivery of
active agents to skin, hair follicles and sebaceous glands)

IT Acne
 Bath preparations
 Detergents
 Dissolution rate
 Particle size distribution
 Psoriasis
 Seborrhea
 Shale oils
 Shampoos
 Surfactants
 (topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)

IT Soaps
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)

IT Cell adhesion molecules
 Coal tar
 Diglycerides
 Interleukin 1.alpha.
 Interleukin 1.beta.
 Interleukin 6
 Keratins
 Sterols
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)

IT Drug delivery systems
 (topical; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)

IT Drug delivery systems
 (transdermal; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)

IT Protein hydrolyzates
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (wheat; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)

IT 144377-73-1, Phospholipid EFA
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (linoleamidopropyl PG dimonium chloride, Phospholipid EFA; topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)

IT 50-23-7, Hydrocortisone 50-28-2, 17.beta.-Estradiol, biological studies
 50-81-7, Vitamin C, biological studies 56-87-1, L-Lysine, biological studies 57-88-5, Cholesterol, biological studies 57-92-1, Streptomycin, biological studies 58-95-7, Vitamin E acetate 59-02-9, .alpha.-Tocopherol 66-81-9, Cycloheximide 68-26-8, Retinol 69-72-7, Salicylic acid, biological studies 74-79-3, L-Arginine, biological studies 77-92-9, Citric acid, biological studies 81-13-0, Panthenol 83-46-5, .beta.-Sitosterol 89-78-1, Menthol 107-41-5, Hexylene glycol 112-80-1, Oleic acid, biological studies 114-07-8, Erythromycin 131-57-7, Oxybenzone 139-96-8, TEA lauryl sulfate 151-21-3, Sodium lauryl sulfate, biological studies 152-11-4, Verapamil hydrochloride 302-79-4, Tretinoin 364-98-7, Diazoxide 378-44-9, Betamethazone 515-69-5, Bisabolol 551-11-1, Prostaglandin F2.alpha. 637-58-1, Pramoxine hydrochloride 745-65-3, Prostaglandin E1 1314-22-3, Zinc dioxide 1323-83-7, Glyceryl distearate 1406-18-4, Vitamin E 2609-46-3, Amiloride 5466-77-3 7704-34-9, Sulfur, biological studies 9004-82-4, Sodium laureth sulfate 9005-00-9, Polyoxyethylene stearyl ether 11096-26-7, Erythropoietin 11103-57-4, Vitamin A 12001-79-5,
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Vitamin K 13463-41-7, Zinc pyrithione 13463-67-7, Titanium dioxide, biological studies 13822-09-8, Benzyl peroxide 21829-25-4, Nifedipine 26590-05-6, Merquat 550 36574-66-0D, N-coco acyl derivs. 38304-91-5, Minoxidil 39236-46-9, Imidazolidinyl urea 42399-41-7, Diltiazem 51145-31-4 51234-28-7, Benoxaprofen 56093-45-9, Selenium sulfide 60559-99-1, N''-Cyano-N-(tert-pentyl)-N'-3-pyridinyl-guanidine 62031-54-3, Fibroblast growth factor 62229-50-9, Epidermal growth factor 64296-33-9, Vitamin C palmitate 65277-42-1, Ketoconazole 67914-69-6, Elubiol 79217-60-0, Cyclosporin 81859-24-7, Polyquaternium 10 94089-18-6, Panthenol triacetate 98113-00-9, Monateric CA 35 98319-26-7, Finasteride **104987-11-3**, FK 506 148619-01-6, Plantaren 2000 222171-02-0, Structure Plus-INCI 313227-46-2D, fatty acid derivs. 313352-27-1, Chembetaine CGF 313352-38-4, Tego-Betain E
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(topical liposomes contg. lipids and detergents for delivery of active agents to skin, **hair** follicles and sebaceous glands)

IT **104987-11-3**, FK 506

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

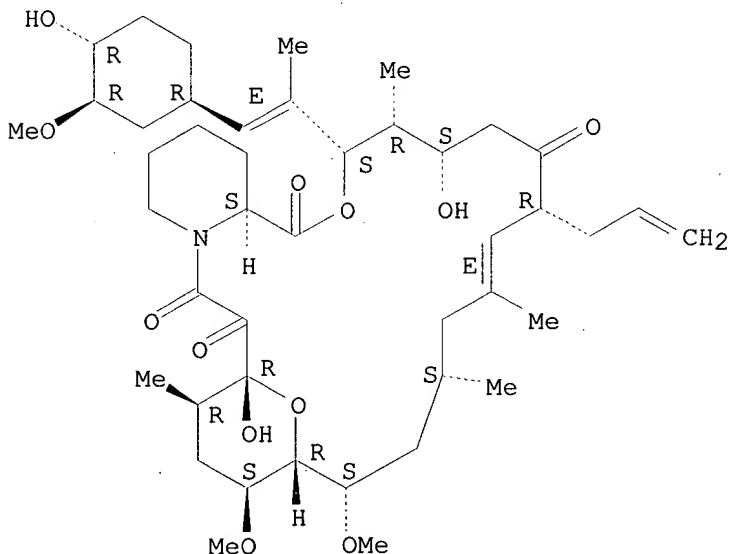
(topical liposomes contg. lipids and detergents for delivery of active agents to skin, **hair** follicles and sebaceous glands)

RN **104987-11-3** HCAPLUS

CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-, (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



L15 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 2000:384175 HCAPLUS

DN 133:30959

TI Preparation of prolanylalkanediones and related compounds for treating neurological disease, vision disorders, and alopecia.

IN Hamilton, Gregory S.; Norman, Mark H.; Wu, Yong-qian

PA GPI Nil Holdings, Inc., USA; Amgen, Inc.

SO PCT Int. Appl., 166 pp.

CODEN: PIXXD2

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DT Patent
 LA English
 IC ICM C07D403-04
 ICS C07D409-12; A61P017-14; A61K031-40; C07D413-04; A61P025-28;
 A61K031-41; C07D207-09; A61P027-00; A61K031-42; C07D403-06;
 A61K031-50; C07D211-34; C07D207-16; C07D405-12

CC 34-2 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000032588	A2	20000608	WO 1999-US28663	19991203
	WO 2000032588	A3	20010222		

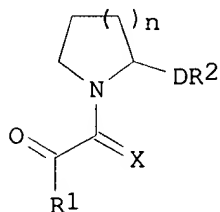
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 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1998-204237 A 19981203

US 1999-453571 A 19991202

OS MARPAT 133:30959

GI



AB Title compds. [I; n = 1-3; X = O, S; R1 = (substituted) alkyl, alkenyl, aryl, heteroaryl, carbocyclyl, heterocyclyl; D = bond, (substituted) alkyl, alkenyl, alkynyl; R2 = CO2H, (substituted) CO2H isostere], were prepd. Thus, L-proline Me ester hydrochloride in CH2Cl2 was treated with Et3N and then with MeO2CCOCl to give 88% Me (2S)-1-(1,2-dioxo-2-methoxyethyl)-2-pyrrolidinecarboxylate. The latter in THF at -78.degree. was treated with 1,1-dimethylpropylmagnesium chloride followed by 3 h stirring at -78.degree. to give 75% Me (2S)-1-(1,2-dioxo-3,3-dimethylpentyl)-2-pyrrolidinecarboxylate. This was stirred overnight with aq. LiOH in MeOH to give 87% (2S)-1-(1,2-dioxo-3,3-dimethylpentyl)-2-pyrrolidinecarboxylic acid. In the MPTP model of Parkinson's disease in mice, I at 10 mg/kg orally gave 10.4-46.5% recovery of TH-stained dopaminergic neurons.

ST prolinylalkanedione prepn neurol disease vision disorder alopecia treatment; memory disorder treatment prolinylalkanedione prepn

IT Nervous system

(Huntington's chorea, treatment; prepn. of prolinylalkanediones and related compds. for treating neurol. disease, vision disorders, and alopecia)

IT Nervous system

(amyotrophic lateral sclerosis, treatment; prepn. of prolinylalkanediones and related compds. for treating neurol. disease, vision disorders, and alopecia)

IT Nervous system

(disease, treatment; prepn. of prolinylalkanediones and related compds.

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for treating neurol. disease, vision disorders, and alopecia)

IT Memory, biological
Vision
(disorder, treatment; prepn. of prolanylalkanediones and related compds. for treating neurol. disease, vision disorders, and alopecia)

IT Regeneration, animal
(nerve, stimulators; prepn. of prolanylalkanediones and related compds. for treating neurol. disease, vision disorders, and alopecia)

IT Nerve
(peripheral, damage treatment; prepn. of prolanylalkanediones and related compds. for treating neurol. disease, vision disorders, and alopecia)

IT Anti-Alzheimer's agents
Antiparkinsonian agents
(prepn. of prolanylalkanediones and related compds. for treating neurol. disease, vision disorders, and alopecia)

IT Amino acids, preparation
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of prolanylalkanediones and related compds. for treating neurol. disease, vision disorders, and alopecia)

IT Alopecia
(treatment; prepn. of prolanylalkanediones and related compds. for treating neurol. disease, vision disorders, and alopecia)

IT 186268-78-0P 222171-48-4P 222171-52-0P 222171-57-5P 222171-58-6P
251917-42-7P 251949-15-2P **251949-16-3P** 251949-17-4P
251949-18-5P 251949-19-6P **251949-20-9P** 251949-21-0P
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251950-29-5P 251950-30-8P 251950-31-9P 251950-32-0P 251950-33-1P
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273924-88-2P 273924-89-3P 273924-90-6P 273924-91-7P 273924-92-8P
273924-93-9P 273924-94-0P 273925-00-1P 273925-01-2P
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of prolanylalkanediones and related compds. for treating neurol. disease, vision disorders, and alopecia)

IT 79-19-6, Thiosemicarbazide 95-14-7, 1H-Benzotriazole 100-02-7,
4-Nitrophenol, reactions 1576-35-8, p-Toluenesulfonylhydrazide
2133-40-6, L-Proline methyl ester hydrochloride 2266-41-3 2361-27-5

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4755-77-5, Ethyl chlorooxoacetate 5781-53-3, Methyl oxalyl chloride
 7511-13-9 10393-86-9, Methanesulfonylhydrazide 22059-22-9 22179-78-8
 27469-60-9 28276-08-6, 1,1-Dimethylpropylmagnesium chloride 29335-36-2
 32231-06-4 273925-05-6 273925-06-7

RL: RCT (Reactant)

(prepn. of prolanylalkanediones and related compds. for treating
 neurol. disease, vision disorders, and alopecia)

IT 186268-77-9P 207444-86-8P 273925-02-3P 273925-03-4P 273925-04-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of prolanylalkanediones and related compds. for treating
 neurol. disease, vision disorders, and alopecia)

IT 251949-16-3P 251949-20-9P 251949-23-2P

251949-26-5P 251949-29-8P 251949-32-3P

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251949-78-7P 251949-79-8P 251949-80-1P

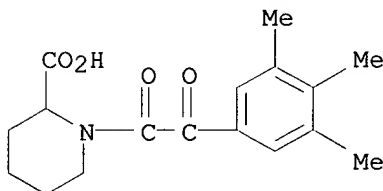
251949-81-2P 251950-07-9P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); USES (Uses)

(prepn. of prolanylalkanediones and related compds. for treating
 neurol. disease, vision disorders, and alopecia)

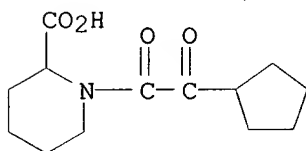
RN 251949-16-3 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethylphenyl)acetyl]- (9CI)
 (CA INDEX NAME)



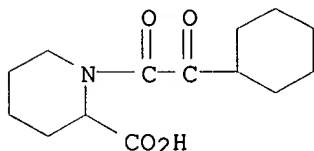
RN 251949-20-9 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(cyclopentyl oxoacetyl)- (9CI) (CA INDEX
 NAME)



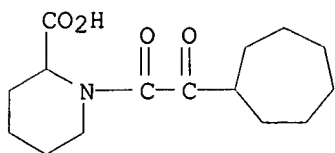
RN 251949-23-2 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(cyclohexyl oxoacetyl)- (9CI) (CA INDEX
 NAME)

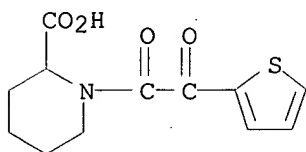


RN 251949-26-5 HCAPLUS

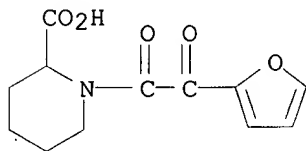
CN 2-Piperidinecarboxylic acid, 1-(cycloheptyl oxoacetyl)- (9CI) (CA INDEX
 NAME)



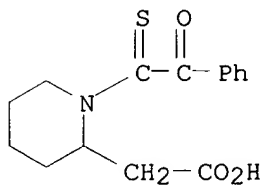
RN 251949-29-8 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(oxo-2-thienylacetyl)- (9CI) (CA INDEX NAME)



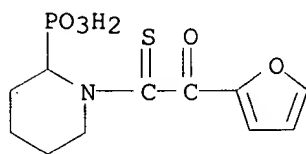
RN 251949-32-3 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(2-furanyloxoacetyl)- (9CI) (CA INDEX NAME)



RN 251949-44-7 HCAPLUS
 CN 2-Piperidineacetic acid, 1-(2-oxo-2-phenyl-1-thioxoethyl)- (9CI) (CA INDEX NAME)



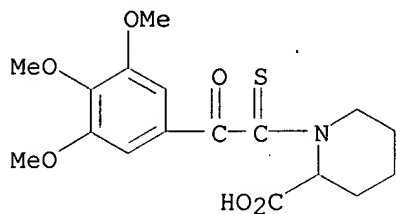
RN 251949-45-8 HCAPLUS
 CN Phosphonic acid, [1-[2-(2-furanyl)-2-oxo-1-thioxoethyl]-2-piperidinyl]- (9CI) (CA INDEX NAME)



RN 251949-66-3 HCAPLUS

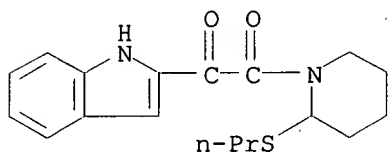
KATHLEEN FULLER EIC1700 308-4290

CN 2-Piperidinecarboxylic acid, 1-[2-oxo-1-thioxo-2-(3,4,5-trimethoxyphenyl)ethyl]- (9CI) (CA INDEX NAME)



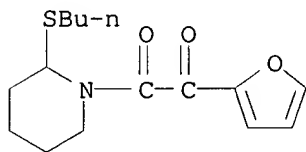
RN 251949-78-7 HCAPLUS

CN Piperidine, 1-(1H-indol-2-ylthioacetyl)-2-(propylthio)- (9CI) (CA INDEX NAME)



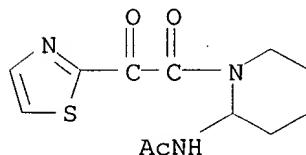
RN 251949-79-8 HCAPLUS

CN Piperidine, 2-(butylthio)-1-(2-furanyloxyacetyl)- (9CI) (CA INDEX NAME)



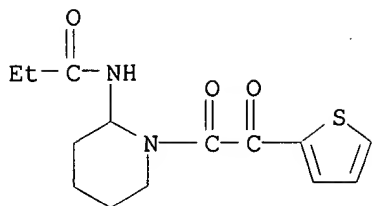
RN 251949-80-1 HCAPLUS

CN Acetamide, N-[1-(oxo-2-thiazolylacetyl)-2-piperidinyl]- (9CI) (CA INDEX NAME)

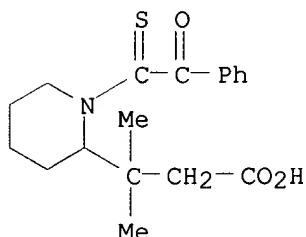


RN 251949-81-2 HCAPLUS

CN Propanamide, N-[1-(oxo-2-thienylacetyl)-2-piperidinyl]- (9CI) (CA INDEX NAME)



RN 251950-07-9 HCAPLUS
 CN 2-Piperidinepropanoic acid, .beta.,.beta.-dimethyl-1-(2-oxo-2-phenyl-1-thioxoethyl)- (9CI) (CA INDEX NAME)



L15 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2001 ACS
 AN 2000:383615 HCAPLUS
 DN 133:217476
 TI Time-specific occurrence of alopecia in neonatal C57BL mice treated with N-methyl-N-nitrosourea and the therapeutic efficacy of tacrolimus hydrate
 AU Yoshizawa, Katsuhiko; Nambu, Hiroyuki; Yamamoto, Daigo; Yang, Jihong; Kiyozuka, Yasuhiko; Shikata, Nobuaki; Tsubura, Airo
 CS Department of Pathology II, Kansai Medical University, Osaka, 570-8506, Japan
 SO Pathol. Int. (2000), 50(3), 175-184
 CODEN: PITEES; ISSN: 1320-5463
 PB Blackwell Science Asia Pty Ltd.
 DT Journal
 LA English
 CC 1-7 (Pharmacology)
 AB Alopecia was induced in male and female neonatal C57BL mice by a single i.p. injection of 60 mg/kg N-methyl-N-nitrosourea (MNU). MNU administration was most effective in the 8-day-old mice and less effective in the 5-day-old mice (at active and early anagen stages of the 1st hair cycle, resp.). No alopecia was seen in the day 14 MNU-treated animals (at telogen stage of the 1st hair cycle). MNU effectively induced hair follicular cell apoptosis at the anagen stage by up-regulation of Bax protein without down-modulation of Bcl-2 protein. In day 8 MNU-treated mice, the immunosuppressive agent 0.01% tacrolimus hydrate (FK506), when topically applied for 5 days from 1 day after MNU treatment (before the occurrence of alopecia), decreased the severity of alopecia. However, it did not stimulate hair growth when applied for 5 days from 20 days of age (after occurrence of alopecia).
 ST tacrolimus immunosuppressant methyl nitroso urea alopecia neonate
 IT Proteins, specific or class
 RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
 (Bax; MNU-induced alopecia in neonatal mice, up-regulation of)
 IT Alopecia
 Apoptosis
 Immunosuppressants

Newborn

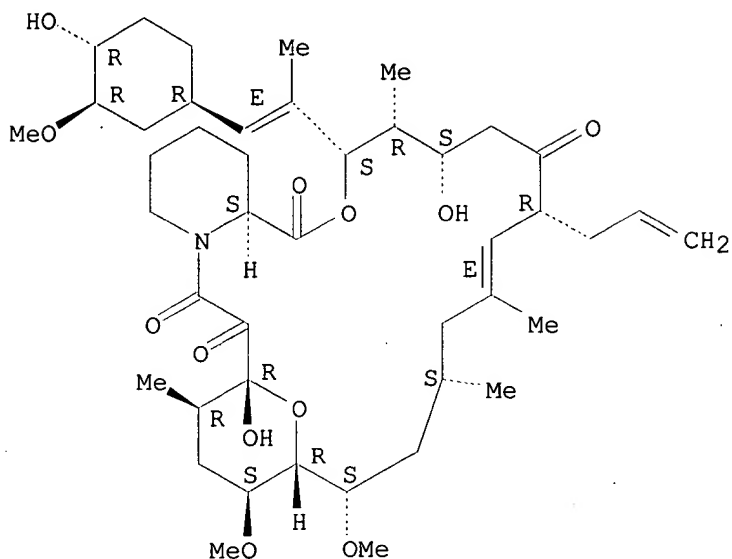
- (MNU-induced alopecia in neonatal mice, effect of tacrolimus)
- IT Proteins, specific or class
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(bcl-2; MNU-induced alopecia in neonatal mice, down-modulation of)
- IT Hair
(follicle; MNU-induced alopecia in neonatal mice, effect of tacrolimus)
- IT Drug delivery systems
(topical; MNU-induced alopecia in neonatal mice, effect of tacrolimus)
- IT 684-93-5, MNU
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(MNU-induced alopecia in neonatal mice, effect of tacrolimus)
- IT 104987-11-3, FK506 109581-93-3, Tacrolimus hydrate
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MNU-induced alopecia in neonatal mice, effect of tacrolimus)

RE.CNT 34

RE

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 - (34) Yoshizawa, K; Lab Invest 1999, V79, P1359 HCAPLUS
- IT 104987-11-3, FK506 109581-93-3, Tacrolimus hydrate
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MNU-induced alopecia in neonatal mice, effect of tacrolimus)
- RN 104987-11-3 HCAPLUS
- CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-, (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

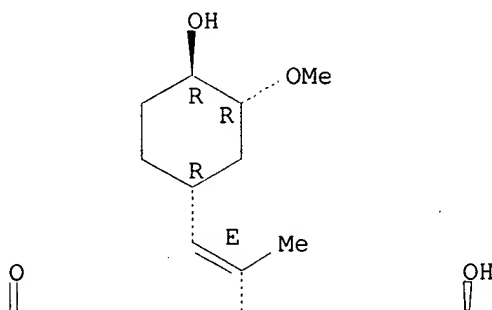
Absolute stereochemistry.
Double bond geometry as shown.



RN 109581-93-3 HCAPLUS
CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-
tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-
dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-
methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-,
monohydrate, (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)-(9CI) (CA
INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A

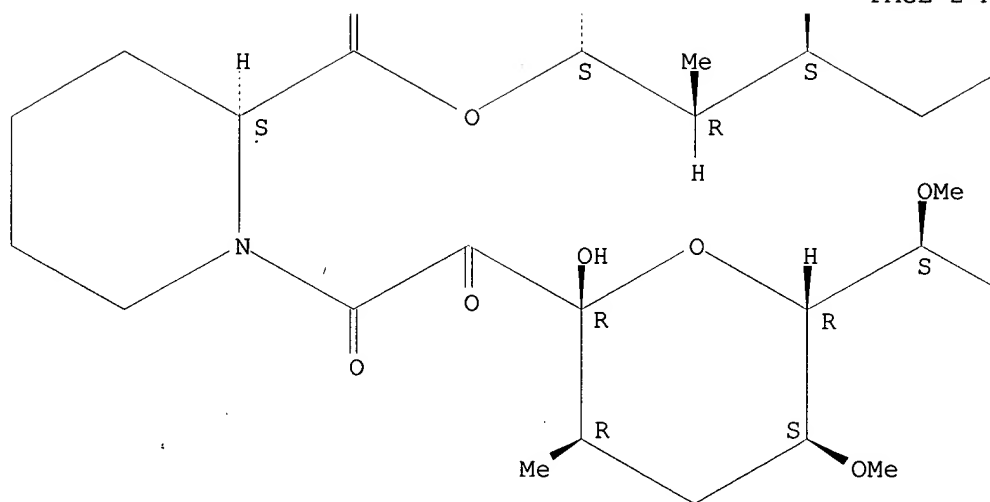


KATHLEEN FULLER EIC1700 308-4290

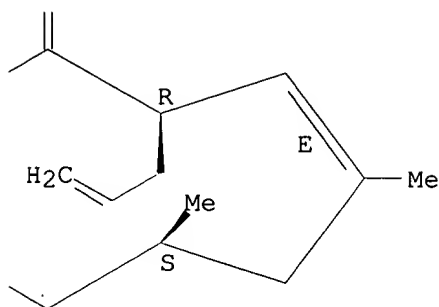
PAGE 1-B

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PAGE 2-A

● H₂O

PAGE 2-B



L15 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2001 ACS
 AN 2000:368433 HCAPLUS
 DN 133:831
 TI Regulation of hair follicle morphogenesis based on .beta.-catenin
 IN Gat, Uri; Dasgupta, Ramanuj; Degenstein, Linda; Fuchs, Elaine
 PA Arch Development Corp., USA
 SO PCT Int. Appl., 127 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC C07K014-47; A61P017-14
 CC 1-12 (Pharmacology)
 Section cross-reference(s): 3, 13

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000031134	A1	20000602	WO 1999-US27490	19991119
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRAI US 1998-109284 P 19981120

AB The present invention provides a method for inducing hair growth by providing .beta.-catenin activity to a skin cell. This may be achieved by providing a .beta.-catenin polypeptide, providing a .beta.-catenin agonist, providing a polynucleotide encoding a .beta.-catenin polypeptide, enhancing the de novo synthesis of .beta.-catenin, increasing the stability or decreasing the degrdn. of .beta.-catenin polypeptides. Specifically, a tissue-specific K14 promoter is used to drive the expression of an N-terminally truncated human .beta.-catenin mutant (.DELTA.N87.beta.cat) in skin. The results indicate that .beta.-catenin is a key factor in controlling hair follicle morphogenesis. The expression of .DELTA.N87.beta.cat in the basal layer of the epidermis and follicle outer root sheath reprograms these cells to induce hair follicle morphogenesis. The inventors show that the process of hair follicle morphogenesis occurs, including the development of dermal papilla and sebaceous glands normally established only in embryogenesis, and hair shaft prodn. typical of both initial and cycling follicles. As de novo induction of hair follicles will result in the growth of new hairs, the invention will be useful therapy for hair growth and alopecia disorders in humans and the induction of hair growth in sheep and other livestock.

ST hair follicle morphogenesis catenin; gene therapy alopecia catenin

IT Transcription factors

KATHLEEN FULLER EIC1700 308-4290

RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
 (Lef-1, activation during hair follicle morphogenesis; regulation of
 hair follicle morphogenesis based on .beta.-catenin)

IT Susceptibility (genetic)
 (estg. propensity for alopecia by evaluation of .beta.-catenin
 expression; regulation of hair follicle morphogenesis based on
 .beta.-catenin)

IT Hair
 (follicle; regulation of hair follicle morphogenesis based on
 .beta.-catenin)

IT Skin
 (gene therapy for; regulation of hair follicle morphogenesis based on
 .beta.-catenin)

IT Promoter (genetic element)
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (immediate early, .beta.-catenin gene therapy driven by; regulation of
 hair follicle morphogenesis based on .beta.-catenin)

IT Proteins, specific or class
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (involucrins, .beta.-catenin gene therapy driven by promoter for;
 regulation of hair follicle morphogenesis based on .beta.-catenin)

IT Skin
 (keratinocyte, gene therapy for; regulation of hair follicle
 morphogenesis based on .beta.-catenin)

IT Drug delivery systems
 (liposomes; regulation of hair follicle morphogenesis based on
 .beta.-catenin)

IT Proteins, specific or class
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (loricrins, .beta.-catenin gene therapy driven by promoter for;
 regulation of hair follicle morphogenesis based on .beta.-catenin)

IT Gene therapy
 Morphogenesis, animal
 (regulation of hair follicle morphogenesis based on .beta.-catenin)

IT Transplant and Transplantation
 (skin; regulation of hair follicle morphogenesis based on
 .beta.-catenin)

IT Hedgehog protein
 RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
 (sonic, apolarized expression in .beta.-catenin transgenic mice;
 regulation of hair follicle morphogenesis based on .beta.-catenin)

IT Skin
 (transplant; regulation of hair follicle morphogenesis based on
 .beta.-catenin)

IT Actins
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (.beta.-, .beta.-catenin gene therapy driven by promoter for;
 regulation of hair follicle morphogenesis based on .beta.-catenin)

IT Catenins
 RL: BAC (Biological activity or effector, except adverse); THU
 (Therapeutic use); BIOL (Biological study); USES (Uses)
 (.beta.-; regulation of hair follicle morphogenesis based on
 .beta.-catenin)

IT Filaggrin
 Keratins
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (.beta.-catenin gene therapy driven by promoter for; regulation of hair
 follicle morphogenesis based on .beta.-catenin)

IT Cytomegalovirus
 Rous sarcoma virus
 Simian virus 40
 (.beta.-catenin gene therapy driven by promoter from; regulation of
 hair follicle morphogenesis based on .beta.-catenin)

IT Ecdysteroids

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (.beta.-catenin gene therapy driven by promoter regulated by;
 regulation of hair follicle morphogenesis based on .beta.-catenin)

IT Adeno-associated virus
 Adenoviridae
 Alopecia
 Polyomavirus
 Vaccinia virus
 (.beta.-catenin gene therapy driven by viral vectors; regulation of
 hair follicle morphogenesis based on .beta.-catenin)

IT Retroviral vectors
 Virus vectors
 (.beta.-catenin gene therapy driven by; regulation of hair follicle
 morphogenesis based on .beta.-catenin)

IT Promoter (genetic element)
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (.beta.-catenin gene therapy driven by; regulation of hair follicle
 morphogenesis based on .beta.-catenin)

IT 79217-60-0, Cyclosporin **104987-11-3**, FK506
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (synchronous **hair** cycle initiated by; regulation of
hair follicle morphogenesis based on .beta.-catenin)

IT 60-54-8, Tetracycline
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (.beta.-catenin gene therapy driven by promoter regulated by;
 regulation of hair follicle morphogenesis based on .beta.-catenin)

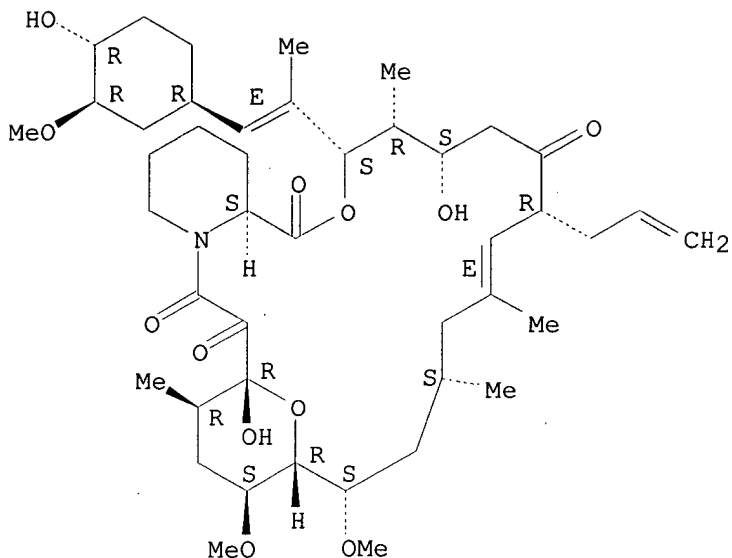
RE.CNT 7
 RE
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 (7) The Regents Of The University Of California; WO 9717982 A 1997 HCAPLUS

IT **104987-11-3**, FK506
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (synchronous **hair** cycle initiated by; regulation of
hair follicle morphogenesis based on .beta.-catenin)

RN 104987-11-3 HCAPLUS

CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-
 tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-
 dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-
 methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-,
 (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



L15 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 2000:227463 HCAPLUS

DN 132:269827

TI Method of treating hair loss using ketoamides

IN Tiesman, Jay Patrick; Fulmer, Andrew Wayne; McIver, John Mcmillan;
Degenhardt, Charles Raymond; Eickhoff, David Joseph

PA The Procter & Gamble Company, USA

SO PCT Int. Appl., 71 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K007-00

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 27, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000018358	A2	20000406	WO 1999-US22215	19990924
	WO 2000018358	A3	20000727		
	W: AU, BR, CA, CN, JP, MX				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 6060299	A1	20000417	AU 1999-60602	19990924
PRAI	US 1998-102458	P	19980930		
	WO 1999-US22215	W	19990924		

AB The present disclosure describes methods for treating hair loss in mammals, including arresting and/or reversing hair loss and promoting hair growth. The methods comprise administering a pyrrolidinyl or piperidinyl ketoamide and a pharmaceutically-acceptable carrier. (S)-N-(3,4,5-trimethoxyphenylglyoxyl)pipecolic acid 1,7-diphenyl-4-heptylamide was prepd. and incorporated into a topical compn.

ST hair loss keto amide

IT Hair preparations

(growth stimulants; treating hair loss using ketoamides)

IT Drug delivery systems

(oral; treating hair loss using ketoamides)

IT Amides, biological studies

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(oxo; treating hair loss using ketoamides)

KATHLEEN FULLER EIC1700 308-4290

IT Drug delivery systems
(topical; treating hair loss using ketoamides)

IT Alopecia
(treating hair loss using ketoamides)

IT 145912-40-9P 186268-54-2P 186268-71-3P 188614-93-9P
263239-96-9P 263239-97-0P
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(treating hair loss using ketoamides)

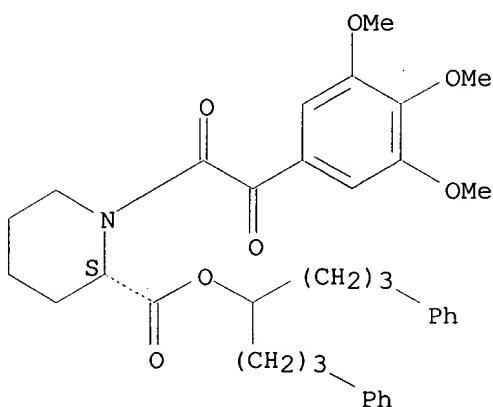
IT 637-59-2, 1-Bromo-3-phenylpropane 2046-18-6, 4-Phenylbutyronitrile
26250-84-0 88755-16-2, 3,4,5-Trimethoxyphenylglyoxylic acid
262608-73-1
RL: RCT (Reactant)
(treating hair loss using ketoamides)

IT 262608-86-6P 263238-16-0P 263238-17-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(treating hair loss using ketoamides)

IT 145912-40-9P 188614-93-9P 263239-96-9P
263239-97-0P
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(treating hair loss using ketoamides)

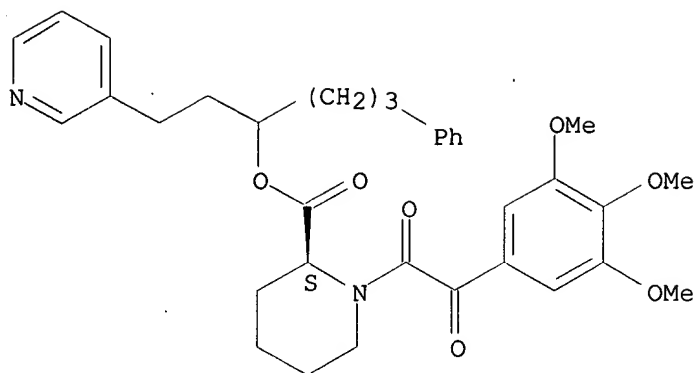
RN 145912-40-9 HCAPLUS
CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-,
4-phenyl-1-(3-phenylpropyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 188614-93-9 HCAPLUS
CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-,
4-phenyl-1-[2-(3-pyridinyl)ethyl]butyl ester, (2S)- (9CI) (CA INDEX NAME)

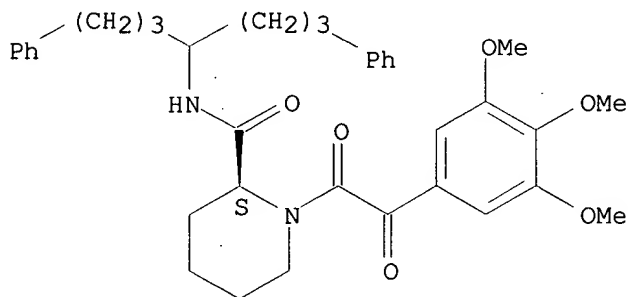
Absolute stereochemistry.



RN 263239-96-9 HCAPLUS

CN 2-Piperidinecarboxamide, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-N-[4-phenyl-1-(3-phenylpropyl)butyl]-, (2S)- (9CI) (CA INDEX NAME)

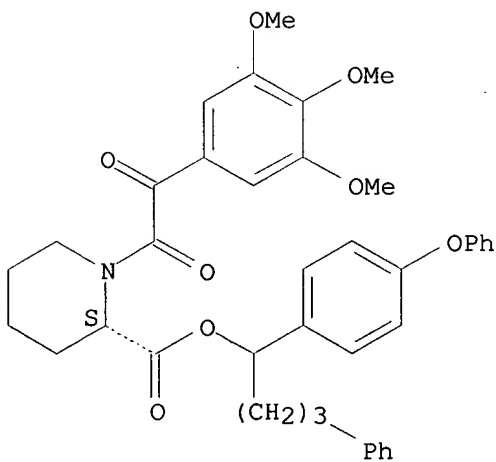
Absolute stereochemistry.



RN 263239-97-0 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-, 1-(4-phenoxyphenyl)-4-phenylbutyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:784078 HCAPLUS

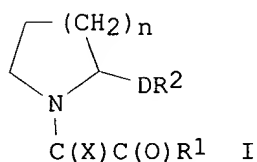
DN 132:22860

TI Preparation of aza-heterocyclic compounds used to treat neurological

KATHLEEN FULLER EIC1700 308-4290

disorders and hair loss
 IN Hamilton, Gregory S.; Norman, Mark H.; Wu, Yong-Qian; Steiner, Joseph P.
 PA Guilford Pharmaceuticals Inc., USA; Amgen, Inc.
 SO PCT Int. Appl., 96 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C07D207-16
 ICS A61K031-40; C07D207-12; C07D403-04; A61K031-41
 CC 27-1 (Heterocyclic Compounds (One Hetero Atom))
 Section cross-reference(s): 1, 34
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9962881	A1	19991209	WO 1998-US25573	19981203
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	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 9917081	A1	19991220	AU 1999-17081	19981203
	BR 9815920	A	20010220	BR 1998-15920	19981203
	EP 1084107	A1	20010321	EP 1998-961866	19981203
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	NO 2000005903	A	20010202	NO 2000-5903	20001121
PRAI	US 1998-87788	P	19980603		
	US 1998-101077	P	19980918		
	WO 1998-US25573	W	19981203		
OS	MARPAT 132:22860				
GI					



AB Prepn. of N-heterocyclic carboxylic acids and carboxylic acid isosteres I [n = 1-3; X = O, S; R1 = C1-C9 straight or branched chain alkyl, C2-C9 straight or branched chain alkenyl, aryl, heteroaryl, carboncycle, heterocycle; D = bond, C1-C10 straight or branched chain alkyl, C2-C10 alkenyl, C2-C10 alkynyl; R2 = carboxylic acid, carboxylic acid isostere] and their use for treating neurol. disorders and for treating alopecia and promoting hair growth are described. E.g., (2S)-1-(1,2-dioxo-3,3-dimethylpentyl)-2-hydroxymethylpyrrolidine was prepd.

ST aza heterocyclic prepn neurol disorder hair loss treatment; neurol disorder disorder aza heterocyclic; hair loss disorder aza heterocyclic; heterocyclic carboxylic acid prepn neurol disorder hair loss treatment

IT Nervous system
 (disease; prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

IT Alopecia
 (prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

IT 186268-78-0P 222171-48-4P 222171-57-5P
 RL: BAC (Biological activity or effector, except adverse); RCT (Reactant);
 KATHLEEN FULLER EIC1700 308-4290

SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

IT 222171-52-0P 222171-58-6P 251917-42-7P 251949-15-2P
251949-16-3P 251949-17-4P 251949-18-5P 251949-19-6P
251949-20-9P 251949-21-0P 251949-22-1P **251949-23-2P**
 251949-24-3P 251949-25-4P **251949-26-5P** 251949-27-6P
 251949-28-7P **251949-29-8P** 251949-30-1P 251949-31-2P
251949-32-3P 251949-33-4P 251949-34-5P 251949-35-6P
 251949-36-7P 251949-37-8P 251949-38-9P 251949-39-0P 251949-40-3P
 251949-41-4P 251949-42-5P 251949-43-6P **251949-44-7P**
251949-45-8P 251949-46-9P 251949-47-0P 251949-48-1P
 251949-49-2P **251949-50-5P** **251949-51-6P**
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 251949-77-6P **251949-78-7P** **251949-79-8P**
251949-80-1P **251949-81-2P** 251949-82-3P 251949-83-4P
 251949-84-5P 251949-85-6P 251949-86-7P 251949-87-8P 251949-88-9P
 251949-89-0P 251949-90-3P 251949-91-4P 251949-92-5P 251949-93-6P
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 251950-04-6P 251950-05-7P 251950-06-8P **251950-07-9P**
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 251950-38-6P 251950-39-7P 251950-40-0P 251950-41-1P 251950-42-2P
 251950-43-3P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

IT 543-27-1, Isobutyl chloroformate 2133-40-6, L-Proline methyl ester hydrochloride

RL: RCT (Reactant)

(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

IT 186268-77-9P 207444-86-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

RE.CNT 7

RE

- (1) Ariad Gene Therapeutics Inc; WO 9606097 A 1996 HCAPLUS
- (2) Ariad Gene Therapeutics Inc; WO 9731898 A 1997 HCAPLUS
- (3) Guilford Pharm Inc; WO 9640633 A 1996 HCAPLUS
- (4) Guilford Pharm Inc; WO 9837885 A 1998 HCAPLUS
- (5) Guilford Pharm Inc; WO 9855090 A 1998 HCAPLUS
- (6) Guilford Pharm Inc; WO 9855091 A 1998 HCAPLUS
- (7) Pharma, V; WO 9200278 A 1992 HCAPLUS

IT 251949-16-3P 251949-20-9P 251949-23-2P
 251949-26-5P 251949-29-8P 251949-32-3P
 251949-44-7P 251949-45-8P 251949-50-5P
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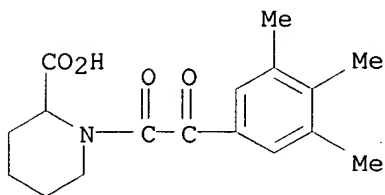
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

KATHLEEN FULLER EIC1700 308-4290

preparation); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and
hair loss)

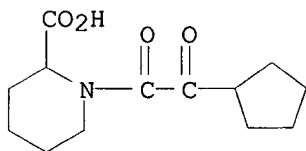
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CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethylphenyl)acetyl]- (9CI)
(CA INDEX NAME)



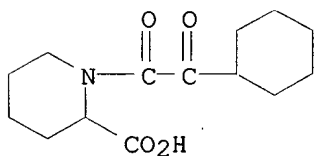
RN 251949-20-9 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(cyclopentyloxoacetyl)- (9CI) (CA INDEX
NAME)



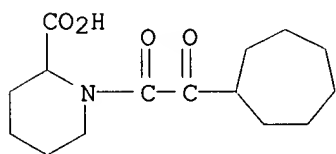
RN 251949-23-2 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(cyclohexyloxoacetyl)- (9CI) (CA INDEX
NAME)



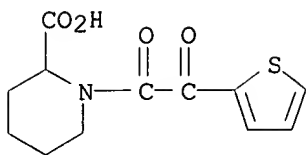
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CN 2-Piperidinecarboxylic acid, 1-(cycloheptyloxoacetyl)- (9CI) (CA INDEX
NAME)

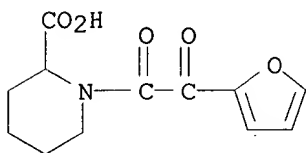


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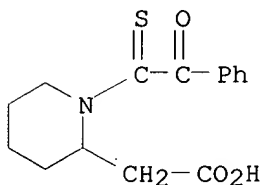
CN 2-Piperidinecarboxylic acid, 1-(oxo-2-thienylacetyl)- (9CI) (CA INDEX
NAME)



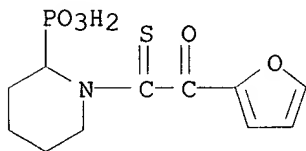
RN 251949-32-3 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(2-furanyloxoacetyl)- (9CI) (CA INDEX NAME)



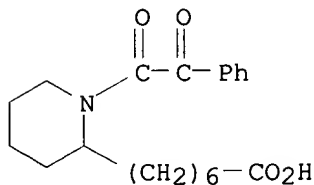
RN 251949-44-7 HCAPLUS
 CN 2-Piperidineacetic acid, 1-(2-oxo-2-phenyl-1-thioxoethyl)- (9CI) (CA INDEX NAME)



RN 251949-45-8 HCAPLUS
 CN Phosphonic acid, [1-[2-(2-furanyl)-2-oxo-1-thioxoethyl]-2-piperidinyl]- (9CI) (CA INDEX NAME)

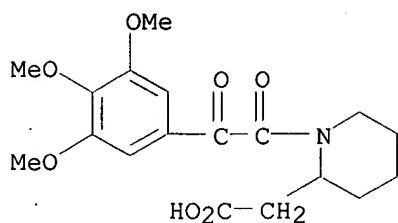


RN 251949-50-5 HCAPLUS
 CN 2-Piperidineheptanoic acid, 1-(oxophenylacetyl)- (9CI) (CA INDEX NAME)



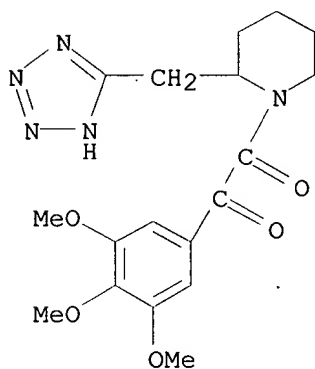
RN 251949-51-6 HCAPLUS
 CN 2-Piperidineacetic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]- (9CI) (CA INDEX NAME)
 KATHLEEN FULLER EIC1700 308-4290

INDEX NAME)



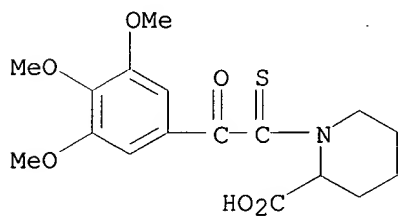
RN 251949-52-7 HCAPLUS

CN Piperidine, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-2-(1H-tetrazol-5-ylmethyl)- (9CI) (CA INDEX NAME)



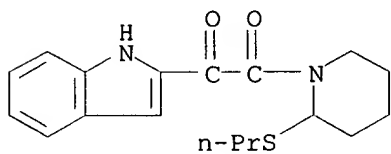
RN 251949-66-3 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[2-oxo-1-thioxo-2-(3,4,5-trimethoxyphenyl)ethyl]- (9CI) (CA INDEX NAME)



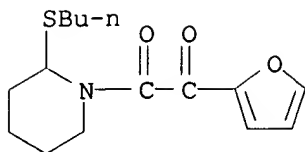
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CN Piperidine, 1-(1H-indol-2-ylthioacetyl)-2-(propylthio)- (9CI) (CA INDEX NAME)

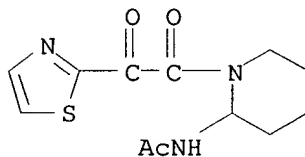


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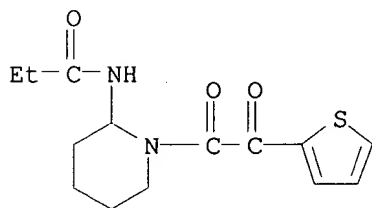
CN Piperidine, 2-(butylthio)-1-(2-furanyloxyacetyl)- (9CI) (CA INDEX NAME)



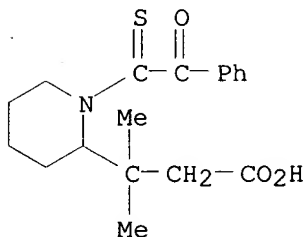
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RN 251949-80-1 HCAPLUS
CN Acetamide, N-[1-(oxo-2-thiazolylacetyl)-2-piperidinyl]- (9CI) (CA INDEX
  NAME)
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RN 251949-81-2 HCAPLUS
CN Propanamide, N-[1-(oxo-2-thienylacetyl)-2-piperidinyl]- (9CI) (CA INDEX
  NAME)
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RN 251950-07-9 HCAPLUS
CN 2-Piperidinepropanoic acid, .beta.,.beta.-dimethyl-1-(2-oxo-2-phenyl-1-
thioxoethyl)- (9CI) (CA INDEX NAME)
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L15 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:783911 HCAPLUS
DN 132:26640
TI Small molecule pipecolic acid derivative hair growth compositions and uses
IN Hamilton, Gregory S.; Steiner, Joseph P.
PA Guilford Pharmaceuticals Inc., USA
SO PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K007-48

KATHLEEN FULLER EIC1700 308-4290

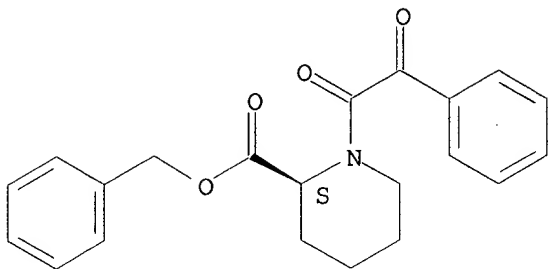
ICS A61K031-445

CC 62-3 (Essential Oils and Cosmetics)

FAN.CNT 1

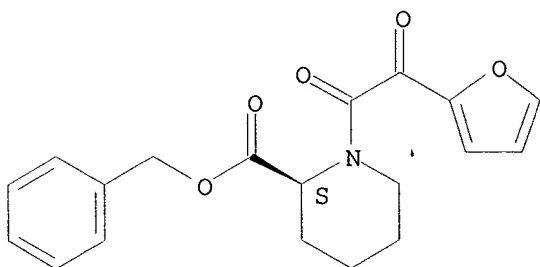
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	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9877176	A1	19991220	AU 1998-77176	19980603
	EP 1083874	A1	20010321	EP 1998-925163	19980603
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI	WO 1998-US11264	A	19980603		
OS	MARPAT 132:26640				
AB	This invention relates to topical compns. and methods for treating alopecia and promoting hair growth using pipecolic acid derivs. For example, 4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate and 1-phenethyl-3-phenylpropyl-1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate showed hair revitalizing properties in C57 black mice.				
ST	piperidinecarboxylate deriv alopecia treatment; hair growth promoter pipecolate deriv				
IT	Immunophilins				
	RL: BSU (Biological study, unclassified); BIOL (Biological study) (affinity to; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations				
	(creams; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations				
	(emulsions; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations				
	(growth stimulants; pipecolic acid derivs. for hair growth compns.)				
IT	Hair preparations				
	(lotions; pipecolic acid derivs. for hair growth compns.)				
IT	Alopecia				
	Shampoos				
	(pipecolic acid derivs. for hair growth compns.)				
IT	141083-86-5	141084-02-8	141084-12-0	141084-13-1	
	141084-14-2	141084-34-6	141084-35-7		
	141084-39-1	141084-41-5	141084-42-6		
	141084-63-1	141097-91-8	186834-77-5	186834-82-2	
	188614-85-9	188614-86-0	190444-03-2	GPI 1044	
	RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pipecolic acid derivs. for hair growth compns.)				
RE.CNT	2				
RE					
	(1) Fujisawa Pharm Co, Ltd; EP 0423714 A 1991 HCAPLUS				
	(2) Guilford Pharm Inc; WO 9813343 A 1998 HCAPLUS				
IT	141083-86-5	141084-02-8	141084-34-6		
	141084-35-7	141084-39-1	141084-41-5		
	141084-42-6	141084-63-1	188614-85-9		
	188614-86-0	190444-03-2	GPI 1044		
	RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (pipecolic acid derivs. for hair growth compns.)				
RN	141083-86-5	HCAPLUS			
CN	2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)				
	KATHLEEN FULLER EIC1700 308-4290				

Absolute stereochemistry.



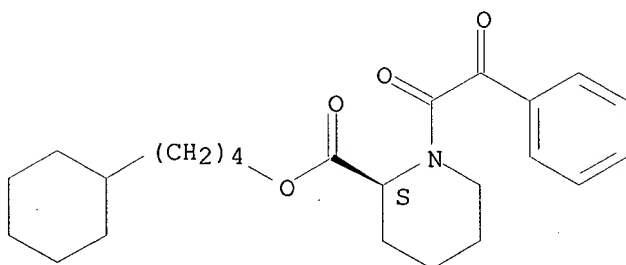
RN 141084-02-8 HCAPLUS
CN 2-Piperidinecarboxylic acid, 1-(2-furanyloxoacetyl)-, phenylmethyl ester,
(2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



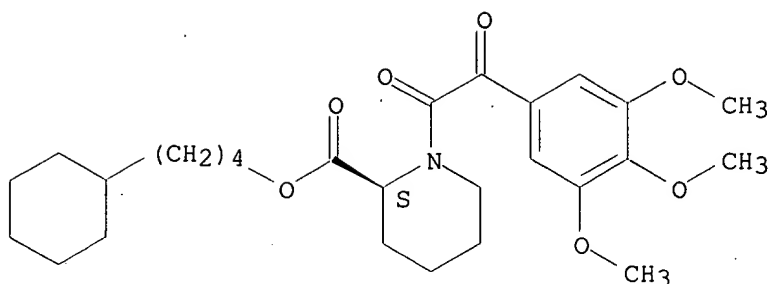
RN 141084-34-6 HCAPLUS
CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-cyclohexylbutyl
ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 141084-35-7 HCAPLUS
CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-,
4-cyclohexylbutyl ester, (2S)- (9CI) (CA INDEX NAME)

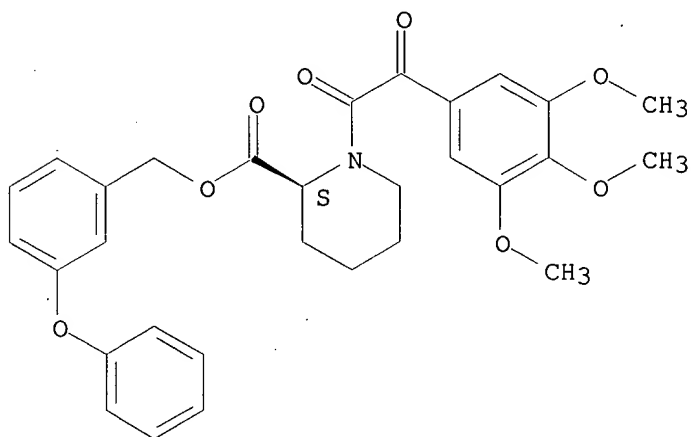
Absolute stereochemistry.



RN 141084-39-1 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-, (3-phenoxyphenyl)methyl ester, (2S)- (9CI) (CA INDEX NAME)

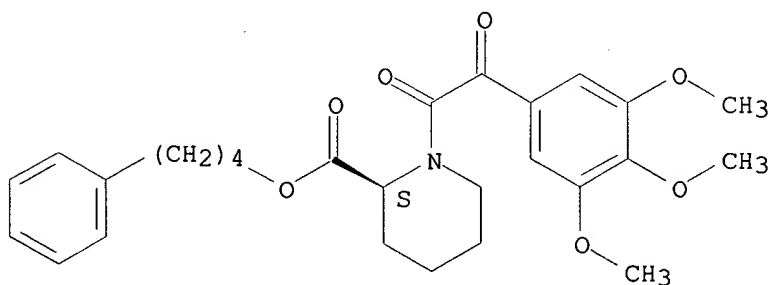
Absolute stereochemistry.



RN 141084-41-5 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-, 4-phenylbutyl ester, (2S)- (9CI) (CA INDEX NAME)

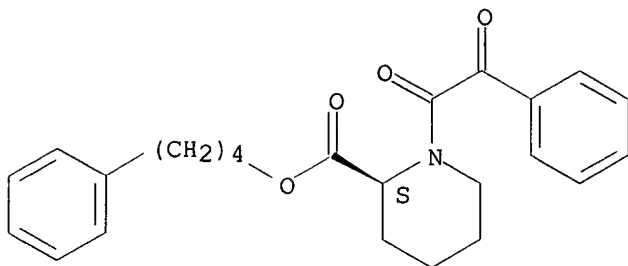
Absolute stereochemistry.



RN 141084-42-6 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-phenylbutyl ester, (2S)- (9CI) (CA INDEX NAME)

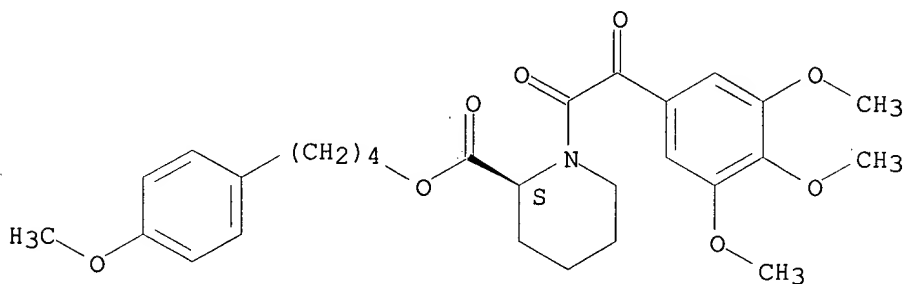
Absolute stereochemistry.



RN 141084-63-1 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-, 4-(4-methoxyphenyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)

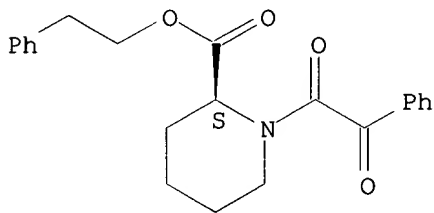
Absolute stereochemistry.



RN 188614-85-9 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 2-phenylethyl ester, (2S)- (9CI) (CA INDEX NAME)

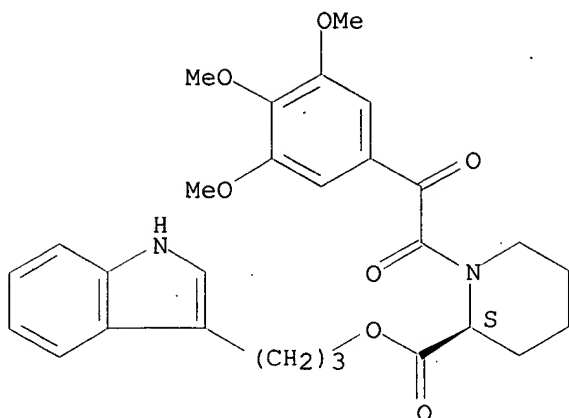
Absolute stereochemistry.



RN 188614-86-0 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-, 3-(1H-indol-3-yl)propyl ester, (2S)- (9CI) (CA INDEX NAME)

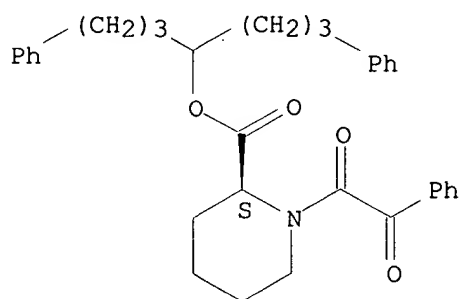
Absolute stereochemistry.



RN 190444-03-2 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-phenyl-1-(3-phenylpropyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L15 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:783908 HCAPLUS

DN 132:26637

TI Heterocyclic thioester and ketone hair growth compositions and uses

IN Hamilton, Gregory S.; Steiner, Joseph P.

PA Guilford Pharmaceuticals Inc., USA

SO PCT Int. Appl., 102 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K007-48

ICS A61K031-40; A61K031-44; A61K031-445; A61K031-425; A61K031-415;
A61K031-535; A61K031-54

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 28

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9962488	A1	19991209	WO 1998-US11251	19980603
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, KATHLEEN FULLER EIC1700 308-4290				

CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9877171 A1 19991220 AU 1998-77171 19980603

EP 1083873 A1 20010321 EP 1998-925157 19980603

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

PRAI WO 1998-US11251 A 19980603

OS MARPAT 132:26637

AB This invention relates to pharmaceutical compns. and methods for treating alopecia and promoting hair growth using heterocyclic thioesters and ketones. Thus, 2-phenyl-1-ethyl-(2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarbothioate (I) was prepd. by the reaction of Me pipercolate-HCl with Me oxalyl chloride followed by the reaction with 1,1-dimethylpropylmagnesium chloride, hydrolysis and reaction with Ph mercaptan. A hair lotion contained 95% EtOH 80.0, I 0.005, hinokitol 0.01, ethoxylated hardened castor oil 0.5, and water 19.0%, and perfume and dye qs.

ST thioester heterocyclic hair growth prepn; ketones heterocyclic hair growth prepn

IT Hair preparations
(creams; heterocyclic thioesters and ketones for hair growth compns.)

IT Hair preparations
(emulsions; heterocyclic thioesters and ketones for hair growth compns.)

IT Hair preparations
(growth stimulants; heterocyclic thioesters and ketones for hair growth compns.)

IT Alopecia
Shampoos
(heterocyclic thioesters and ketones for hair growth compns.)

IT Immunophilins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(heterocyclic thioesters and ketones for hair growth compns.)

IT Ketones, biological studies
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(heterocyclic; heterocyclic thioesters and ketones for hair growth compns.)

IT Hair preparations
(lotions; heterocyclic thioesters and ketones for hair growth compns.)

IT Carboxylic acids, biological studies
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(thiocarboxylic, esters, heterocyclic; heterocyclic thioesters and ketones for hair growth compns.)

IT	205388-13-2P	205388-14-3P	205388-15-4P	205388-16-5P	205388-17-6P
	205388-18-7P	205388-19-8P	205388-20-1P	205388-22-3P	205388-23-4P
	205388-24-5P	205388-25-6P	205388-26-7P	205388-27-8P	205388-28-9P
	205388-29-0P	205388-30-3P	205388-31-4P	205388-32-5P	205388-33-6P
	205388-35-8P	205388-36-9P	205388-37-0P	205388-38-1P	205388-39-2P
	205388-42-7P	205388-43-8P	205388-44-9P	205388-45-0P	
	205388-48-3P	205388-49-4P	205388-50-7P	205388-53-0P	
	205388-54-1P	205388-55-2P	205388-56-3P	205388-57-4P	
	205388-58-5P	205388-59-6P	205388-60-9P	205388-61-0P	205388-62-1P
	205388-80-3P	217179-46-9P	217179-50-5P	217180-44-4P	
	217180-90-0P	251948-44-4P	251948-45-5P	251948-46-6P	
	251948-47-7P	251948-48-8P			

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(heterocyclic thioesters and ketones for hair growth compns.)

IT 108-98-5, Phenylmercaptan, reactions 955-40-8 2133-40-6 4830-93-7
5781-53-3, Methyloxalyl chloride 28276-08-6 32559-18-5 139419-63-9
KATHLEEN FULLER EIC1700 308-4290

186268-77-9

RL: RCT (Reactant)

(heterocyclic thioesters and ketones for hair growth compns.)

IT 186268-78-0P 205388-64-3P 205388-65-4P 205388-66-5P 205388-67-6P
205388-68-7P 222171-23-5PRL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(heterocyclic thioesters and ketones for hair growth compns.)

RE.CNT 4

RE

(1) Fujisawa Pharm Co Ltd; EP 0423714 A 1991 HCAPLUS

(2) Guilford Pharm Inc; WO 9813343 A 1998 HCAPLUS

(3) Hallam, K; EP 0471135 A 1992 HCAPLUS

(4) Merck & Co Inc; WO 9314762 A 1993 HCAPLUS

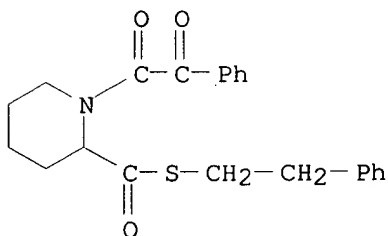
IT 205388-48-3P 205388-54-1P 217179-50-5P

217180-90-0P

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)

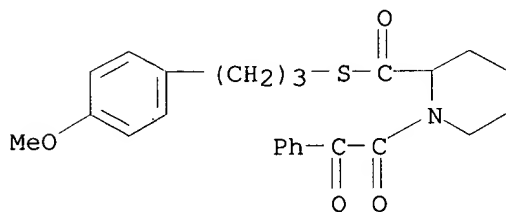
(heterocyclic thioesters and ketones for hair growth compns.)

RN 205388-48-3 HCAPLUS

CN 2-Piperidinecarbothioic acid, 1-(oxophenylacetyl)-, S-(2-phenylethyl)
ester (9CI) (CA INDEX NAME)

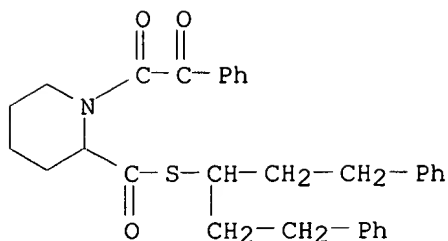
RN 205388-54-1 HCAPLUS

CN 2-Piperidinecarbothioic acid, 1-(oxophenylacetyl)-, S-[3-(4-methoxyphenyl)propyl] ester (9CI) (CA INDEX NAME)

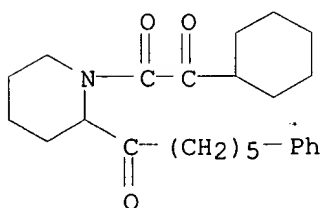


RN 217179-50-5 HCAPLUS

CN 2-Piperidinecarbothioic acid, 1-(oxophenylacetyl)-, S-[3-phenyl-1-(2-phenylethyl)propyl] ester (9CI) (CA INDEX NAME)



RN 217180-90-0 HCAPLUS
 CN Piperidine, 1-(cyclohexyloxyacetyl)-2-(1-oxo-6-phenylhexyl)- (9CI) (CA INDEX NAME)



L15 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2001 ACS
 AN 1999:783903 HCAPLUS
 DN 132:26633
 TI Pipecolic acid derivatives for hair growth compositions
 IN Hamilton, Gregory S.; Steiner, Joseph P.
 PA Guilford Pharmaceuticals, Inc., USA
 SO PCT Int. Appl., 103 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K007-48
 ICS A61K031-50; A61K031-435; A61K031-445; C07K005-02; C07K005-08
 CC 62-3 (Essential Oils and Cosmetics)
 Section cross-reference(s): 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9962483	A1	19991209	WO 1998-US11242	19980603
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9877167	A1	19991220	AU 1998-77167	19980603
EP 1083872	A1	20010321	EP 1998-925152	19980603
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI WO 1998-US11242	A	19980603		
AB This invention relates to pharmaceutical compns. and methods for treating alopecia and promoting hair growth using pipecolic acid derivs. Thus, a hair lotion contained 95% EtOH, a pipecolic acid deriv. such as 4-(4-methoxyphenyl)butyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate 10.0, .alpha.-tocopherol acetate 0.01, ethoxylated hardened castor oil				

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0.5, and water 9.0%, and perfume and dye.

ST pipecolic acid deriv hair growth

IT Hair preparations
(creams; pipecolic acid derivs. for hair growth compns.)

IT Hair preparations
(emulsions; pipecolic acid derivs. for hair growth compns.)

IT Hair preparations
(growth stimulants; pipecolic acid derivs. for hair growth compns.)

IT Hair preparations
(lotions; pipecolic acid derivs. for hair growth compns.)

IT Alopecia
Immunosuppressants
Shampoos
(pipecolic acid derivs. for hair growth compns.)

IT Immunophilins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(pipecolic acid derivs. for hair growth compns.)

IT 535-75-1D, Pipecolic acid, derivs. **53123-88-9**, Rapamycin
141084-63-1 145021-24-5 145021-25-6 145021-36-9
145021-37-0 145021-38-1 145021-39-2 145021-43-8 145021-46-1
145021-47-2 145037-51-0 147438-29-7 149438-31-3, Way
124466 152754-34-2 152754-35-3 152754-36-4 152754-37-5
152754-38-6 152754-39-7 152754-40-0 152754-41-1 152754-42-2
153011-31-5, SBL 506 **155255-30-4 155255-31-5**
155255-32-6 155367-80-9 155399-01-2 155399-02-3
155668-46-5 155668-47-6 155668-49-8
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194232-19-4 251969-48-9 252002-37-2 252002-55-4 252002-58-7
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252002-79-2 252002-81-6 252002-83-8
252002-85-0 252002-87-2 252002-89-4 252002-91-8 252002-96-3
252002-98-5 252002-99-6 252003-00-2 252003-01-3 252003-02-4
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(pipecolic acid derivs. for hair growth compns.)

RE.CNT 6

RE

- (1) Armistead, D; US 5620971 A 1997 HCAPLUS
 - (2) Astra Aktiebolaget; WO 9611943 A 1996 HCAPLUS
 - (3) Fujisawa Pharm Co Ltd; EP 0423714 A 1987 HCAPLUS
 - (4) Guilford Pharm; WO 9813343 A 1998 HCAPLUS
 - (5) Nelson, F; US 5385908 A 1995 HCAPLUS
 - (6) Skotnicki, J; US 5252579 A 1993 HCAPLUS
- IT **53123-88-9**, Rapamycin **141084-63-1 145021-24-5**
147438-29-7 149438-31-3, Way **124466 152754-42-2**
153011-31-5, SBL 506 **155255-30-4 155255-31-5**
155367-80-9 155668-46-5 155668-47-6
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186834-63-9 186834-64-0 186834-65-1
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186959-60-4 186959-61-5 186959-64-8
186959-67-1 186959-70-6 186959-77-3
186974-30-1 252002-64-5 252002-66-7
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252002-83-8 252002-96-3

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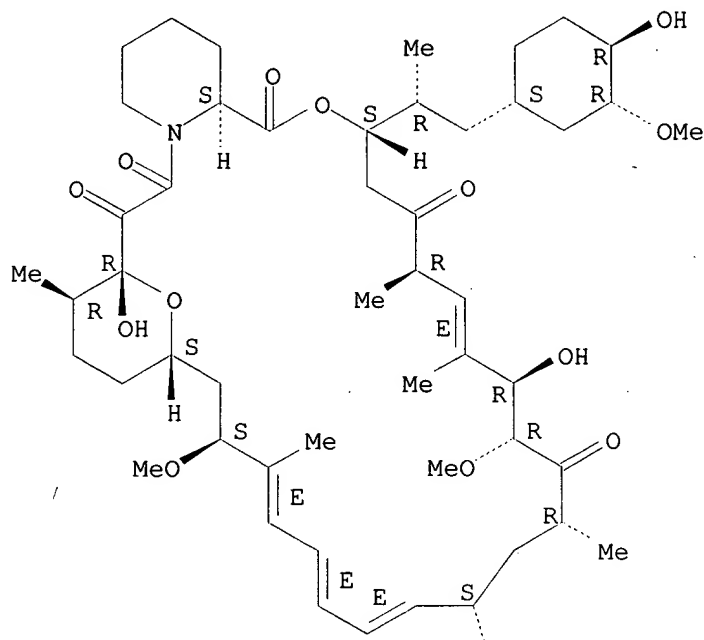
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(pipecolic acid derivs. for hair growth compns.)

RN 53123-88-9 HCAPLUS

CN Rapamycin (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



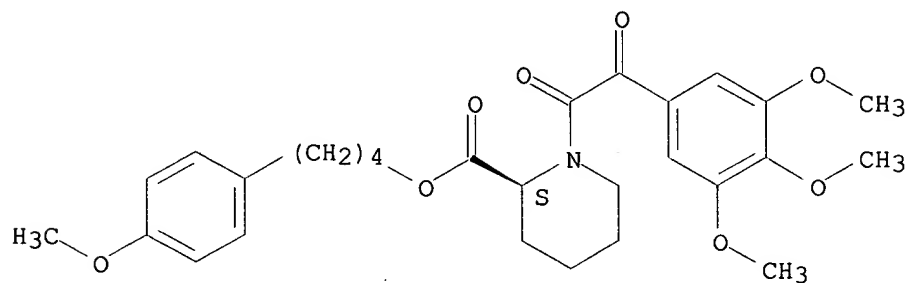
PAGE 2-A

Me

RN 141084-63-1 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(3,4,5-trimethoxyphenyl)acetyl]-,
4-(4-methoxyphenyl)butyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

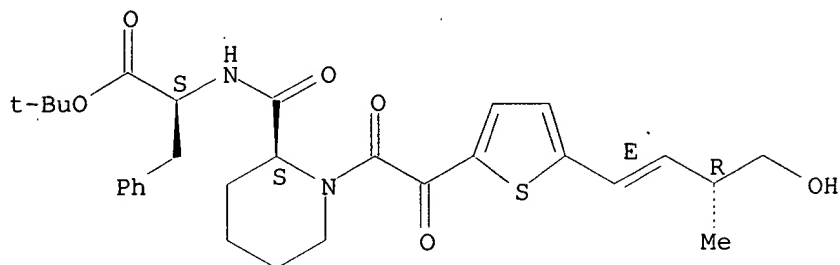


RN 145021-24-5 HCAPLUS

CN L-Phenylalanine, N-[[[(2S)-1-[[[5-[(1E,3R)-4-hydroxy-3-methyl-1-butenyl]-2-
KATHLEEN FULLER EIC1700 308-4290

thienyl]oxoacetyl]-2-piperidinyl]carbonyl]-, 1,1-dimethylethyl ester (9CI)
(CA INDEX NAME)

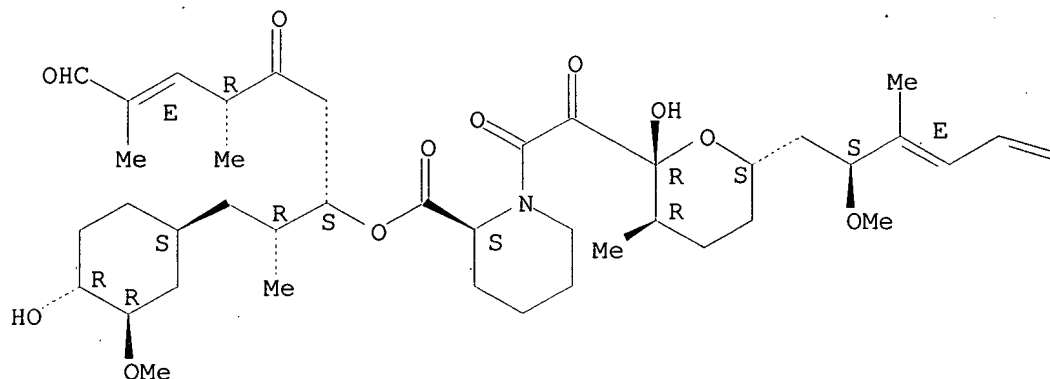
Absolute stereochemistry.
Double bond geometry as shown.



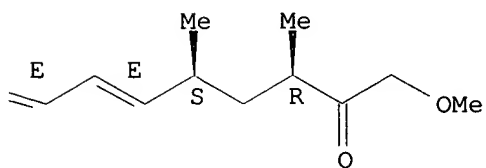
RN 147438-29-7 HCAPLUS
CN 2-Piperidinecarboxylic acid, 1-[[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]tetrahydro-2-hydroxy-3-methyl-2H-pyran-2-yl]oxoacetyl]-, (1S,4R,5E)-1-[(1R)-2-[(1S,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethyl]-4,6-dimethyl-3,7-dioxo-5-heptenyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



RN 149438-31-3 HCAPLUS
CN 27,31-Epoxy-5,36-etheno-1H,5H-pyrido[2,1-c][1,2,4]triazolo[1,2-q][1,4,17,18]oxatriazacyclohentriacontine-1,3,9,15,19,25,26(2H,6H,10H,19aH)-heptone, 7,8,11,14,16,17,20,21,22,23,27,28,29,30,31,32,33,36-
KATHLEEN FULLER EIC1700 308-4290

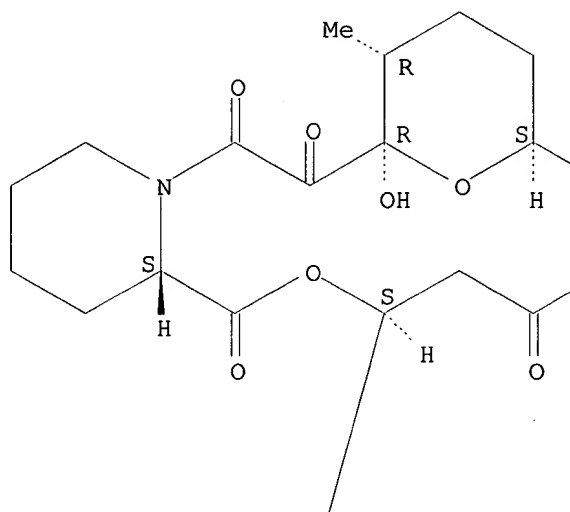
octadecahydro-11,27-dihydroxy-17-[(1R)-2-[(1S,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethyl]-10,33-dimethoxy-6,8,12,14,28,34-hexamethyl-2-phenyl-, (6S,8R,10R,11R,12E,14R,17S,19aS,27R,28R,31S,33S,34E)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

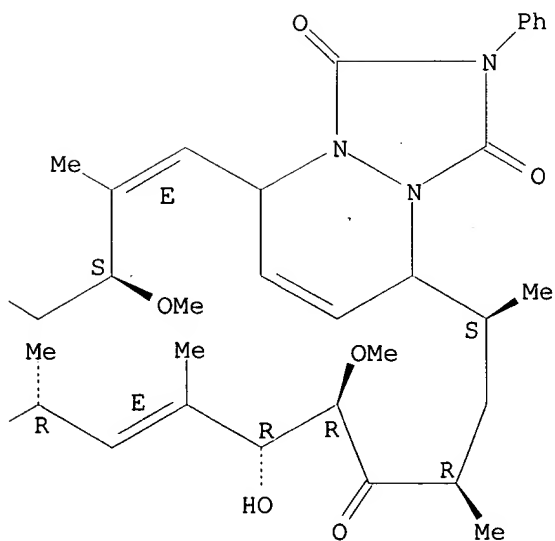
Double bond geometry as described by E or Z.

Currently available stereo shown.

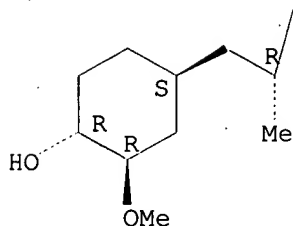
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PAGE 1-B

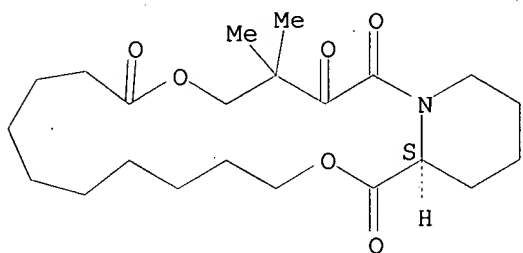


PAGE 2-A



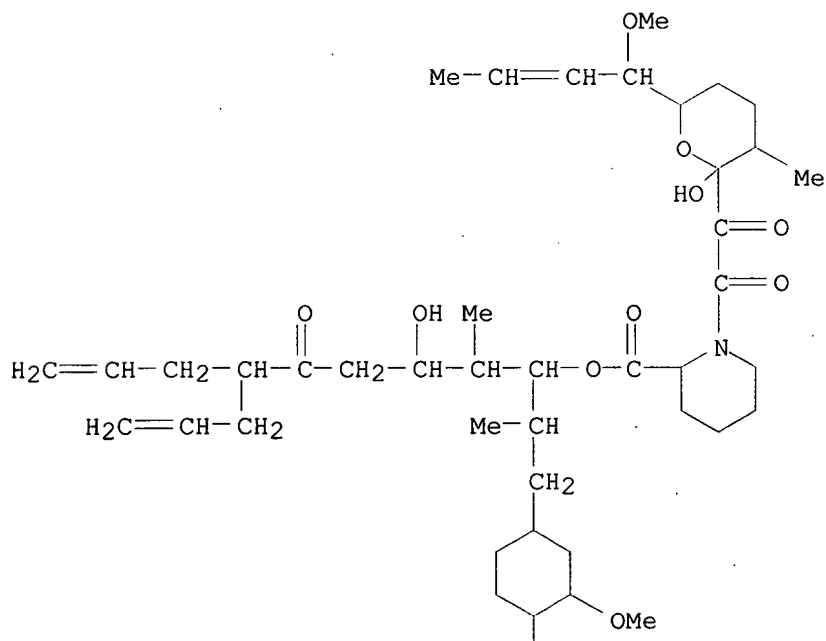
RN 152754-42-2 HCAPLUS
 CN Pyrido[2,1-c][1,9,4]dioxazacyclononadecane-1,12,16,17(3H,19H)-tetrone,
 tetradecahydro-15,15-dimethyl-, (22aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 153011-31-5 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-[oxo[(2R,3R,6S)-tetrahydro-2-hydroxy-6-
 [(1S,2Z)-1-methoxy-2-butenyl]-3-methyl-2H-pyran-2-yl]acetyl]-,
 (1R,2R,3S)-3-hydroxy-1-[(1R)-2-[(1S,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-
 1-methylethyl]-2-methyl-5-oxo-6-(2-propenyl)-8-nonenyl ester, (2S)- (9CI)
 (CA INDEX NAME)

PAGE 1-A



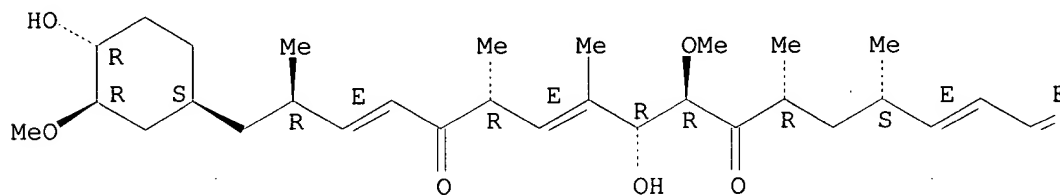
PAGE 2-A



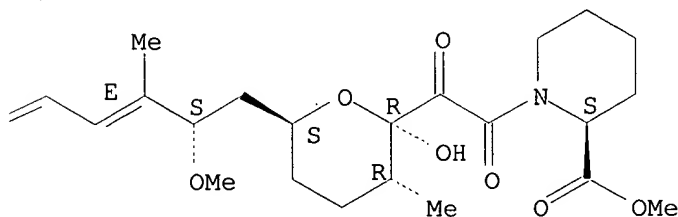
RN 155255-30-4 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-[oxo[(2R,3R,6S)-tetrahydro-2-hydroxy-6-
 [(2S,3E,5E,7E,9S,11R,13R,14R,15E,17R,19E,21R)-14-hydroxy-22-[(1S,3R,4R)-4-
 hydroxy-3-methoxycyclohexyl]-2,13-dimethoxy-3,9,11,15,17,21-hexamethyl-
 12,18-dioxo-3,5,7,15,19-docosapentaenyl]-3-methyl-2H-pyran-2-yl]acetyl]-,
 methyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

PAGE 1-A



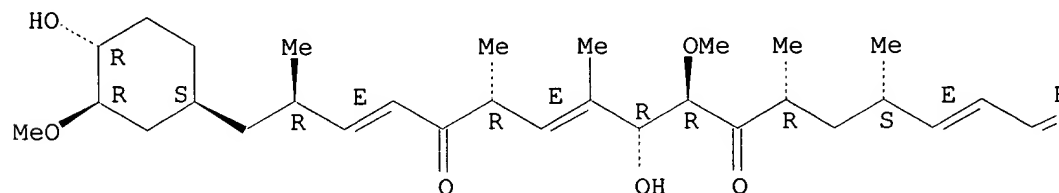
PAGE 1-B



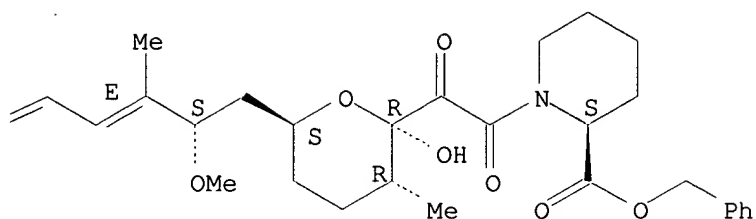
RN 155255-31-5 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-[oxo[(2R,3R,6S)-tetrahydro-2-hydroxy-6-
 [(2S,3E,5E,7E,9S,11R,13R,14R,15E,17R,19E,21R)-14-hydroxy-22-[(1S,3R,4R)-4-
 hydroxy-3-methoxycyclohexyl]-2,13-dimethoxy-3,9,11,15,17,21-hexamethyl-
 12,18-dioxo-3,5,7,15,19-docosapentaenyl]-3-methyl-2H-pyran-2-yl]acetyl]-,
 phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

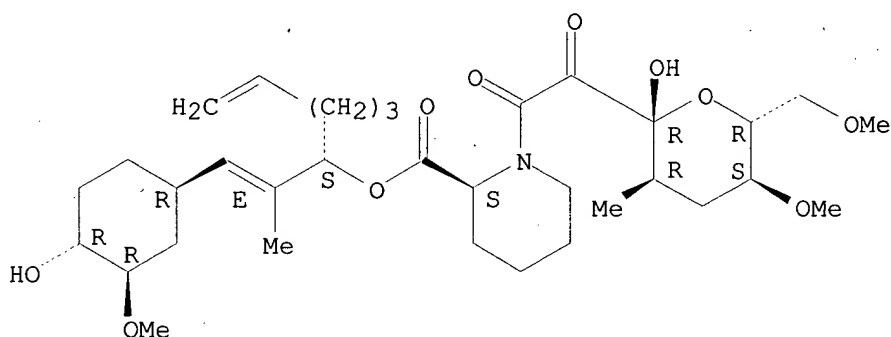


RN 155367-80-9 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(4,5-dideoxy-4-methyl-6,8-di-O-methyl-.alpha.-D-ribo-2,3-octodiulo-3,7-pyranosonoyl)-, (1S)-1-[(1E)-2-[(3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-5-hexenyl ester, (2S)- (9CI)
(CA INDEX NAME)

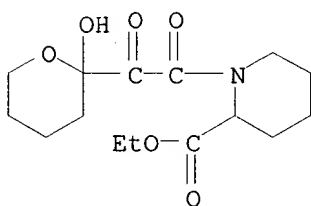
Absolute stereochemistry.

Double bond geometry as shown.



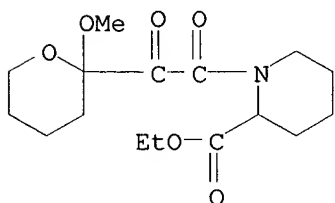
RN 155668-46-5 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[oxo(tetrahydro-2-hydroxy-2H-pyran-2-yl)acetyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 155668-47-6 HCAPLUS

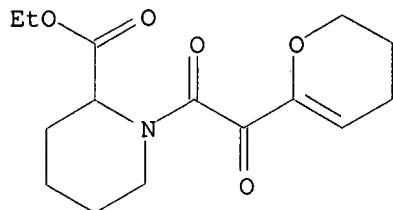
CN 2-Piperidinecarboxylic acid, 1-[oxo(tetrahydro-2-methoxy-2H-pyran-2-yl)acetyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 155668-50-1 HCAPLUS

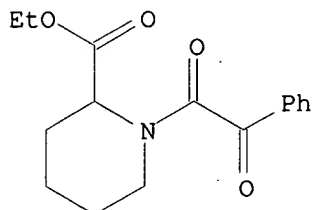
KATHLEEN FULLER EIC1700 308-4290

CN 2-Piperidinecarboxylic acid, 1-[(3,4-dihydro-2H-pyran-6-yl)oxoacetyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 155668-51-2 HCAPLUS

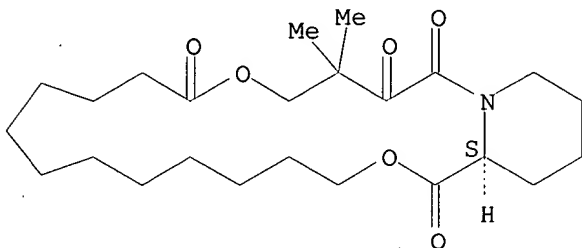
CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, ethyl ester (9CI) (CA INDEX NAME)



RN 156038-45-8 HCAPLUS

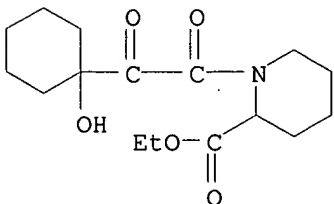
CN Pyrido[2,1-c][1,9,4]dioxaaazacyclohepticosine-1,14,18,19(3H,21H)-tetrone, hexadecahydro-17,17-dimethyl-, (24aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186834-63-9 HCAPLUS

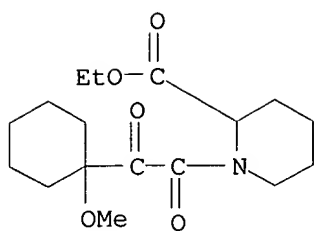
CN 2-Piperidinecarboxylic acid, 1-[(1-hydroxycyclohexyl)oxoacetyl]-, ethyl ester (9CI) (CA INDEX NAME)



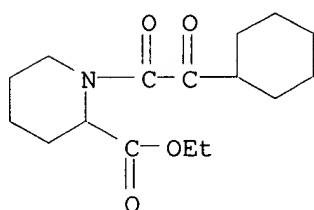
RN 186834-64-0 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-[(1-methoxycyclohexyl)oxoacetyl]-, ethyl ester (9CI) (CA INDEX NAME)

KATHLEEN FULLER EIC1700 308-4290

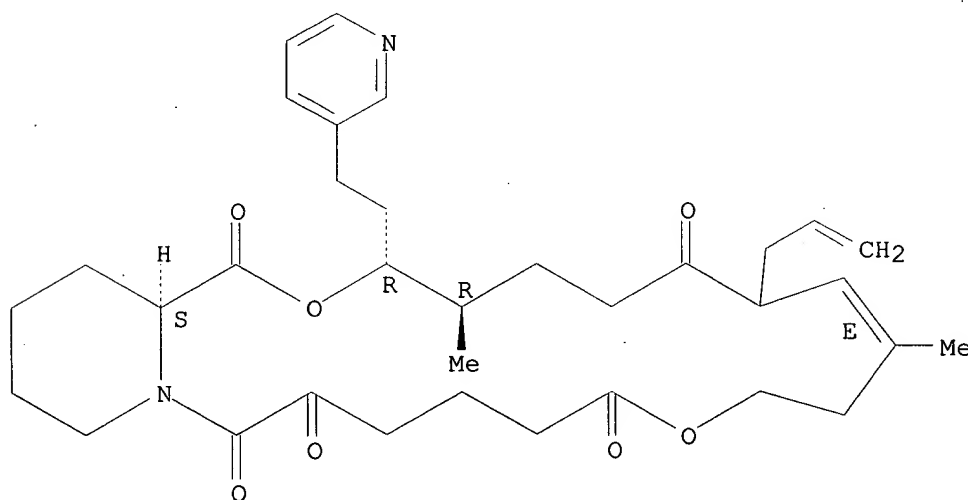


RN 186834-65-1 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(cyclohexyloxyacetyl)-, ethyl ester (9CI)
 (CA INDEX NAME)



RN 186959-50-2 HCAPLUS
 CN Pyrido[2,1-c][1,11,4]dioxazacycloheptacosine-1,7,14,18,19(8H,15H,21H)-
 pentone, 3,4,5,6,11,12,16,17,22,23,24,24a-dodecahydro-4,10-dimethyl-8-(2-
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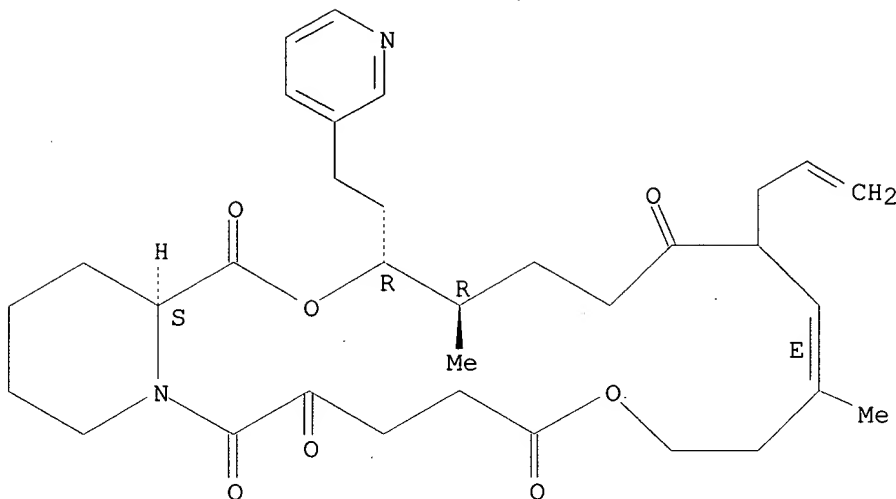
Absolute stereochemistry.
 Double bond geometry as described by E or Z.



RN 186959-54-6 HCAPLUS
 CN 14H-Pyrido[2,1-c][1,10,4]dioxazacycloeicosine-1,7,14,17,18(8H,20H)-
 pentone, 3,4,5,6,11,12,15,16,21,22,23,23a-dodecahydro-4,10-dimethyl-8-(2-
 propenyl)-3-[2-(3-pyridinyl)ethyl]-, (3R,4R,9E,23aS)- (9CI) (CA INDEX
 NAME)

Absolute stereochemistry.
 Double bond geometry as described by E or Z.

KATHLEEN FULLER EIC1700 308-4290

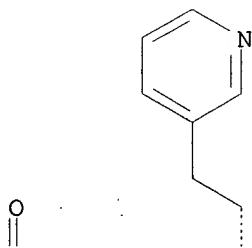


RN 186959-57-9 HCAPLUS
 CN 15,18-Epoxy-14H-pyrido[2,1-c][1,12,4]dioxazacyclodocosine-
 1,7,14,19,20(8H,22H)-pentone, 3,4,5,6,11,12,15,16,17,18,23,24,25,25a-
 tetradecahydro-4,10,18-trimethyl-8-(2-propenyl)-3-[2-(3-pyridinyl)ethyl]-,
 (3R,4R,9E,15S,18R,25aS)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.

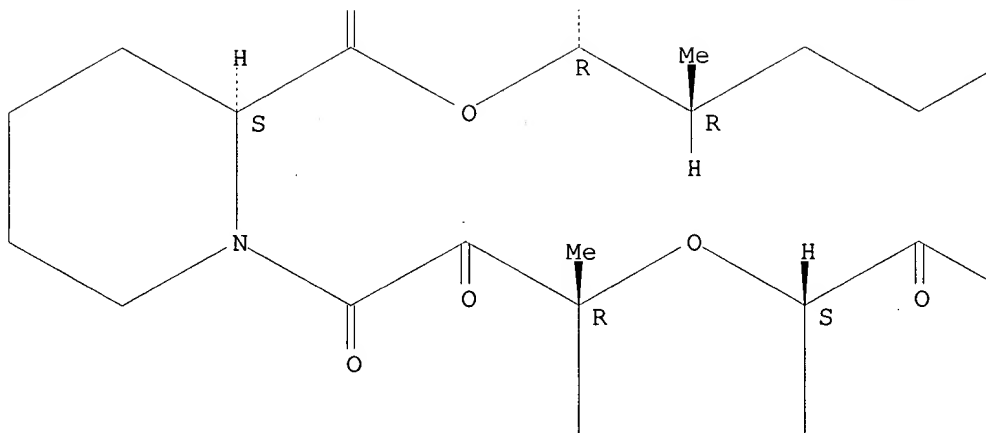
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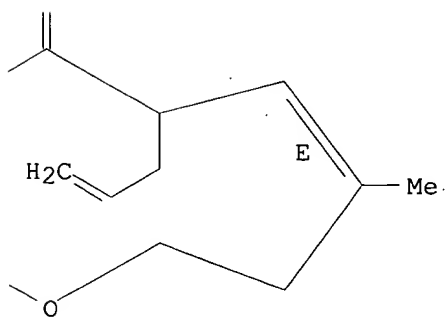
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PAGE 2-B



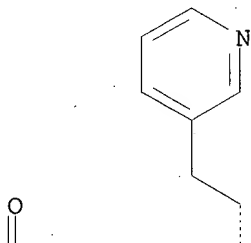
KATHLEEN FULLER EIC1700 308-4290

RN 186959-60-4 HCAPLUS
CN 16,19-Epoxy-3H,15H-pyrido[2,1-c][1,12,4]dioxazacyclotricosine-
1,7,15,20,21(4H,23H)-pentone, 5,6,8,11,12,13,16,17,18,19,24,25,26,26a-
tetradecahydro-4,10,19-trimethyl-8-(2-propenyl)-3-[2-(3-pyridinyl)ethyl]-,
(3R,4R,9E,16S,19R,26aS)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.

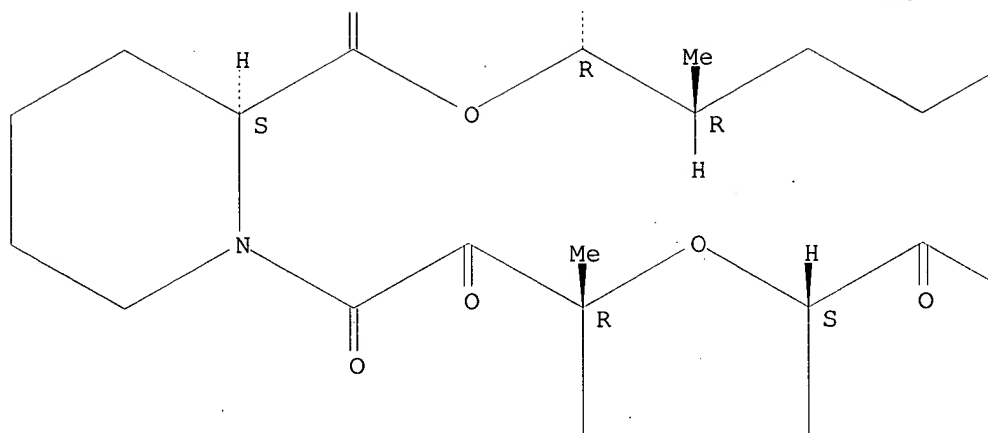
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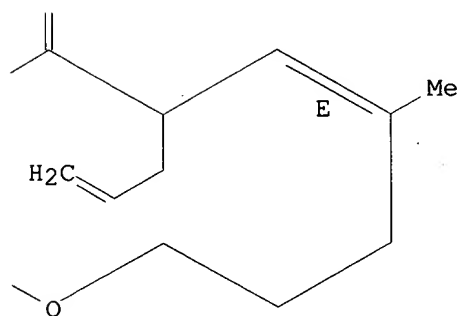
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PAGE 2-A



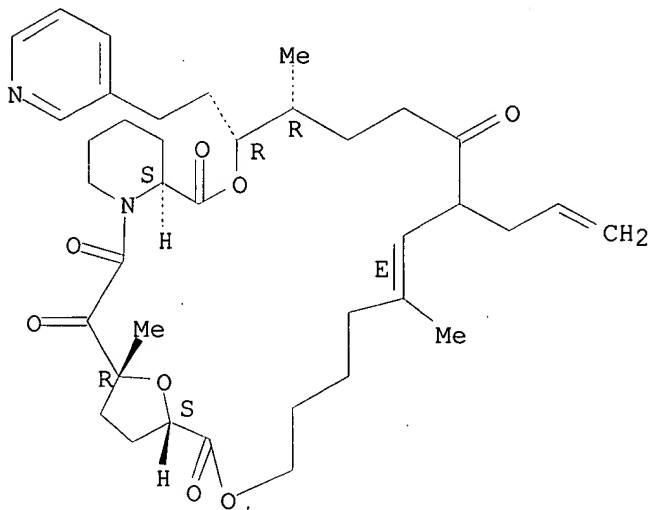
PAGE 2-B



KATHLEEN FULLER EIC1700 308-4290

RN 186959-61-5 HCAPLUS
 CN 17,20-Epoxy-16H-pyrido[2,1-c][1,12,4]dioxazacyclotetracosine-
 1,7,16,21,22(8H,24H)-pentone, 3,4,5,6,11,12,13,14,17,18,19,20,25,26,27,27a-
 hexadecahydro-4,10,20-trimethyl-8-(2-propenyl)-3-[2-(3-pyridinyl)ethyl]-,
 (3R,4R,9E,17S,20R,27aS)- (9CI) (CA INDEX NAME)

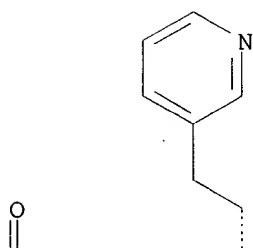
Absolute stereochemistry.
 Double bond geometry as shown.



RN 186959-64-8 HCAPLUS
 CN 15,18-Epoxy-14H-pyrido[2,1-c][1,12,4]dioxazacyclodocosine-
 1,7,14,19,20(8H,22H)-pentone, 3,4,5,6,11,12,15,16,17,18,23,24,25,25a-
 tetradecahydro-4,10-dimethyl-8-(2-propenyl)-3-[2-(3-pyridinyl)ethyl]-,
 (3R,4R,9E,15S,18R,25aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as described by E or Z.

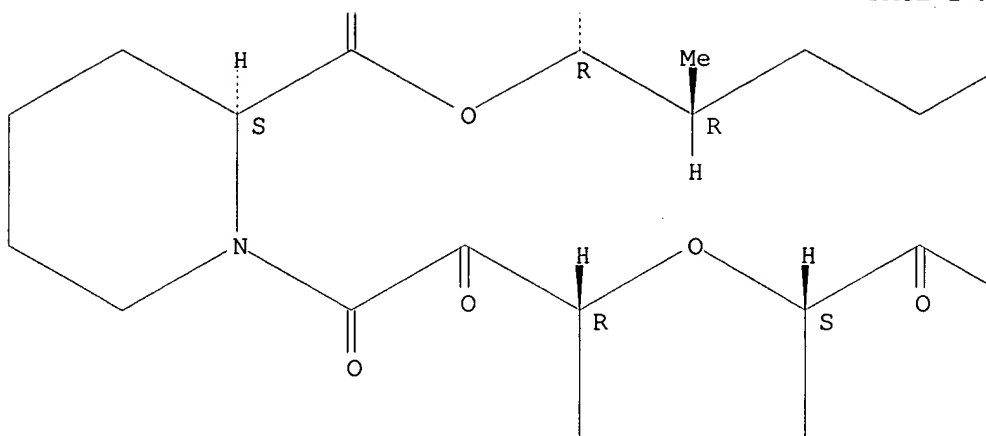
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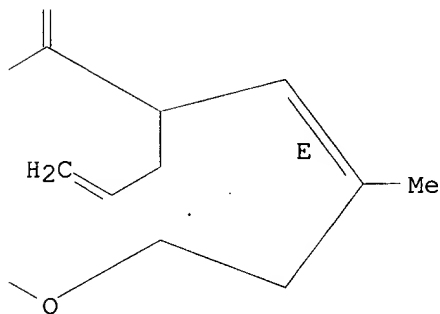
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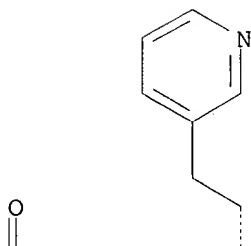


RN 186959-67-1 HCAPLUS
 CN 16,19-Epoxy-3H,15H-pyrido[2,1-c][1,12,4]dioxazacyclotricosine-
 1,7,15,20,21(4H,23H)-pentone, 5,6,8,11,12,13,16,17,18,19,24,25,26,26a-
 tetradecahydro-4,10-dimethyl-8-(2-propenyl)-3-[2-(3-pyridinyl)ethyl]-,
 (3R,4R,9E,16S,19R,26aS)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.

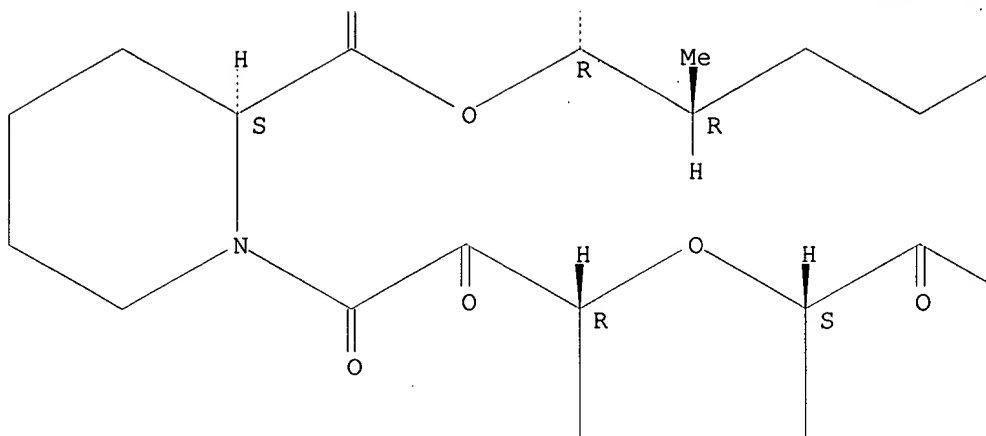
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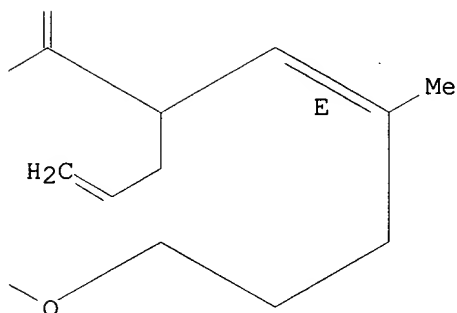
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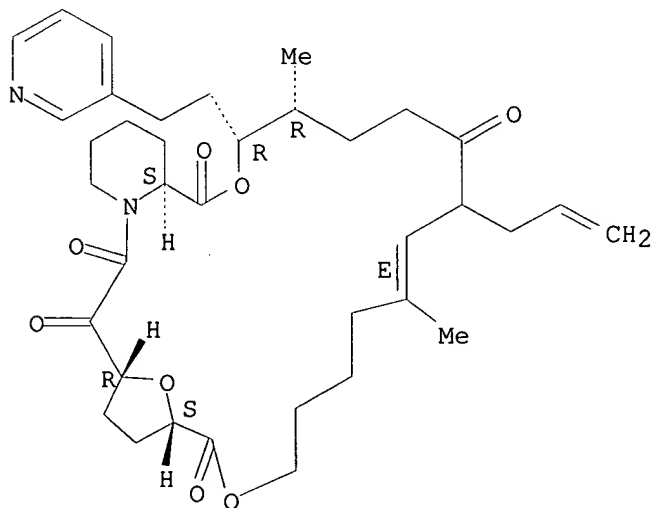


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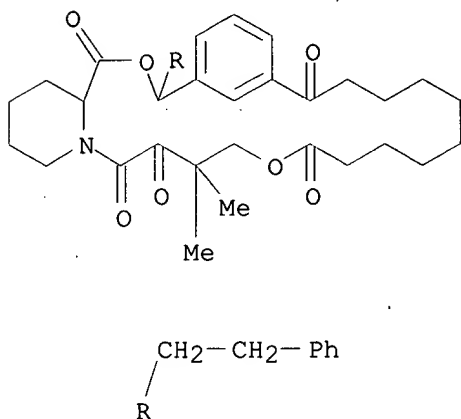
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 1,7,16,21,22(8H,24H)-pentone, 3,4,5,6,11,12,13,14,17,18,19,20,25,26,27,27a-
 hexadecahydro-4,10-dimethyl-8-(2-propenyl)-3-[2-(3-pyridinyl)ethyl]-,
 (3R,4R,9E,17S,20R,27aS)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



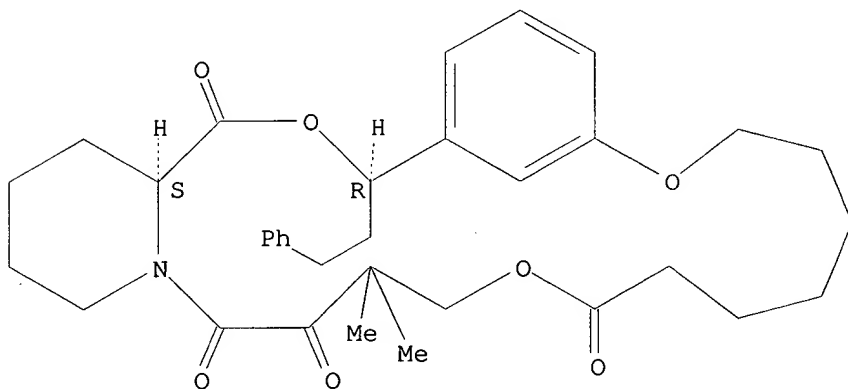
KATHLEEN FULLER EIC1700 308-4290

RN 186959-77-3 HCAPLUS
 CN 3H-4,8-Methenopyrido[2,1-c][1,9,4]dioxazacyclopentacosine-
 1,9,18,22,23(25H)-pentone, 10,11,12,13,14,15,16,17,20,21,26,27,28,28a-
 tetradecahydro-21,21-dimethyl-3-(2-phenylethyl)-, (28aS)- (9CI) (CA INDEX
 NAME)

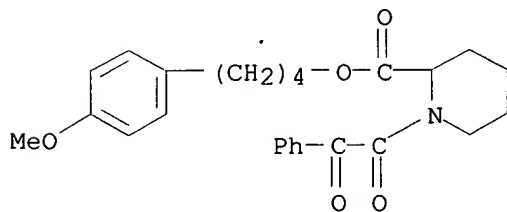


RN 186974-30-1 HCAPLUS
 CN 3H-4,8-Metheno-10H-pyrido[2,1-c][1,9,17,4]trioxazacyclotricosine-
 1,16,20,21(11H,23H)-tetrone, 12,13,14,15,18,19,24,25,26,26a-decahydro-
 19,19-dimethyl-3-(2-phenylethyl)-, (3R,26aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



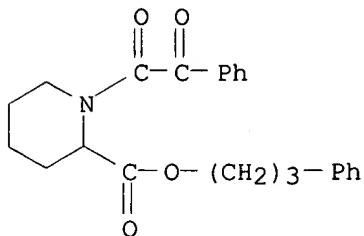
RN 252002-64-5 HCAPLUS
 CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 4-(4-methoxyphenyl)butyl ester (9CI) (CA INDEX NAME)



RN 252002-66-7 HCAPLUS

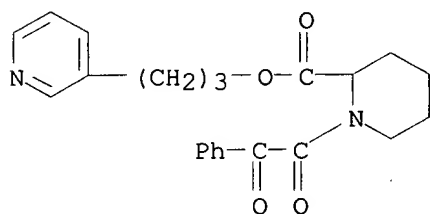
KATHLEEN FULLER EIC1700 308-4290

CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 3-phenylpropyl ester
(9CI) (CA INDEX NAME)



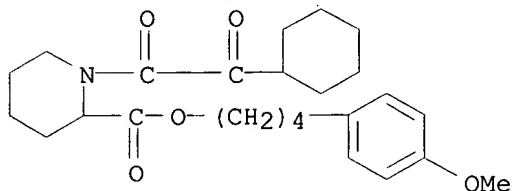
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CN 2-Piperidinecarboxylic acid, 1-(oxophenylacetyl)-, 3-(3-pyridinyl)propyl ester (9CI) (CA INDEX NAME)



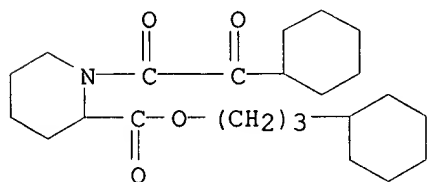
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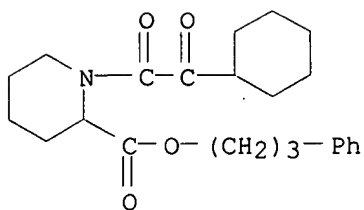
RN 252002-81-6 HCAPLUS

CN 2-Piperidinecarboxylic acid, 1-(cyclohexyloxoacetyl)-, 3-cyclohexylpropyl ester (9CI) (CA INDEX NAME)



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CN 2-Piperidinecarboxylic acid, 1-(cyclohexyloxoacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

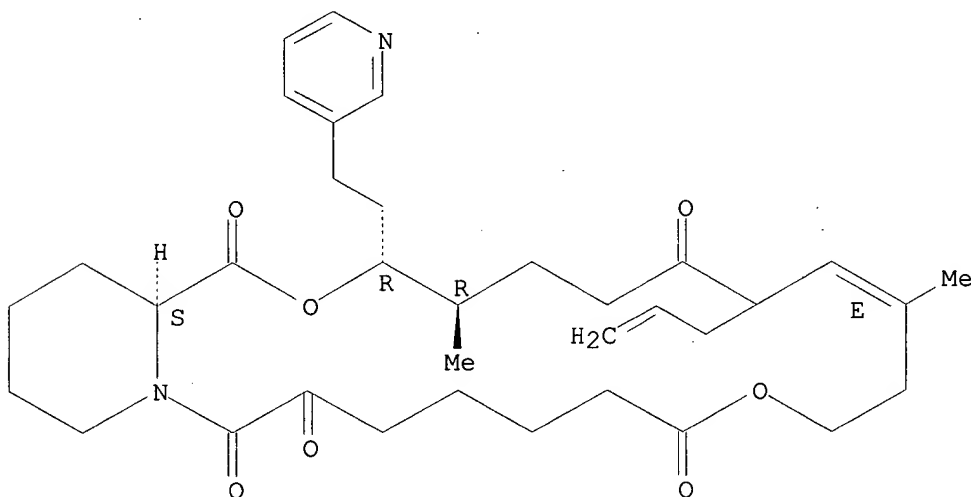


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CN 14H-Pyrido[2,1-c][1,12,4]dioxazacyclodocosine-1,7,14,19,20(8H,22H)-
 pentone, 3,4,5,6,11,12,15,16,17,18,23,24,25,25a-tetradecahydro-4,10-
 dimethyl-8-(2-propenyl)-3-[2-(3-pyridinyl)ethyl]-, (3R,4R,9E,25aS)- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.



L15 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 1998:804155 HCAPLUS

DN 130:52725

TI Preparation and use of pyrrolidines in hair growth compositions

IN Hamilton, Gregory S.; Steiner, Joseph P.

PA Guilford Pharmaceuticals Inc., USA

SO PCT Int. Appl., 187 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K007-48

CC 34-2 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1, 63

FAN.CNT 6

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9855090	A1	19981210	WO 1998-US11237	19980603
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RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, KATHLEEN FULLER EIC1700 308-4290				

FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
CM, GA, GN, ML, MR, NE, SN, TD, TG

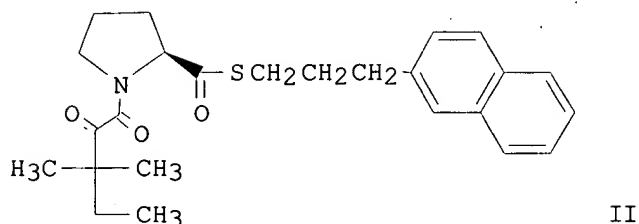
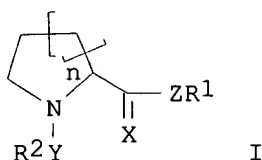
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ZA 9804783	A	19981204	ZA 1998-4783	19980603
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EP 983054	A1	20000308	EP 1998-925148	19980603

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IE, FI

US 6239164	B1	20010529	US 1999-369860	19990809
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PRAI US 1997-869426 A 19970604
WO 1998-US11237 W 19980603

GI



AB This invention relates to pharmaceutical compns. and methods for treating alopecia and promoting hair growth using non-immunosuppressive neuroimmunophilin FKBP ligands [I; n = 1, 2, 3; Y = CO, COCO, SO₂, CS; X = O, S; Z = S, O, CH₂, (CH₂)₃, SCH₂, S(CH₂)₂, S(CH₂)₃; R₁ = benzyl, 3-phenylpropyl, 3-(3-pyridyl)propyl, diphenylmethyl, etc.; R₂ = cyclohexyl, Ph, tert-Bu, 3,4,5-trimethoxyphenyl, etc.], stereoisomers, pharmaceutically acceptable salts, esters, and solvates thereof. The title compd. II was tested, in vitro, in inhibition of the peptidyl-prolyl isomerase activity and preferably for use topically to the skin to treat alopecia or promote hair growth effectively.

ST carboxylate pyrrolidine prepn alopecia treatment

IT Alopecia

Drug delivery systems

(prepn. and use of pyrrolidines in hair growth compns.)

IT 186452-09-5P

RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and use of pyrrolidines in hair growth compns.)

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KATHLEEN FULLER EIC1700 308-4290

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217186-58-8P				

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and use of pyrrolidines in hair growth compns.)

IT 86-81-7, 3,4,5-Trimethoxybenzaldehyde 96-15-1, 2-Methylbutylamine
 103-63-9, 2-(Bromoethyl)benzene 108-98-5, Phenyl mercaptan, reactions
 122-97-4, 3-Phenyl-1-propanol 558-13-4, Carbontetrabromide 955-40-8
 1122-82-3, Cyclohexylisothiocyanate 2577-48-2, L-Proline methyl ester
 2859-67-8, 3-Pyridinepropanol 4830-93-7, 1-Chloro-4-phenylbutane
 5406-18-8, 3-(p-Methoxyphenyl)-1-propanol 5781-53-3, Methyloxalyl
 chloride 20329-96-8, Methyl (E)-3,4,5-Trimethoxycinnamate 26250-84-0
 28276-08-6, 1,1-Dimethylpropylmagnesium chloride 32559-18-5, Methyl
 pipercolate hydrochloride 34592-47-7 53560-26-2

RL: RCT (Reactant)

(prepn. and use of pyrrolidines in hair growth compns.)

IT 104-53-0P, 3-Phenyl-1-propanol 17486-86-1P, 1,5-Diphenyl-3-pentanol
 21011-66-5P 57293-19-3P 69603-49-2P, 3-Pyridinepropanethiol
 88537-44-4P 89113-44-0P 139419-63-9P 186268-77-9P 186268-78-0P
 205388-66-5P 205388-67-6P 205388-68-7P 205448-82-4P 210048-37-6P
 210048-38-7P 210103-98-3P 210103-99-4P 217186-09-9P 217186-59-9P
 217186-60-2P 217186-61-3P 217186-62-4P 217186-63-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and use of pyrrolidines in hair growth compns.)

RE.CNT 3

- RE
- (1) Ariad Gene Therapeutics, Inc; WO 9731898 A 1997 HCAPLUS
 - (2) Hamilton, G; US 5614547 A 1997 HCAPLUS
 - (3) The Board of Trustees of the Leland Stanford Junior Univ; WO 9502684 A 1995 HCAPLUS

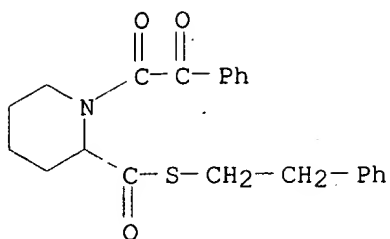
IT **205388-48-3P 205388-54-1P 217179-50-5P**
217180-90-0P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and use of pyrrolidines in hair growth compns.)

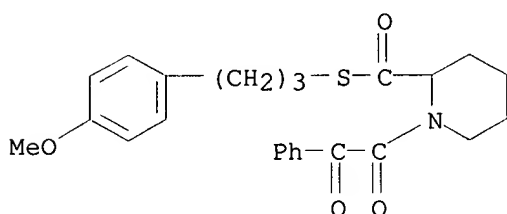
RN 205388-48-3 HCAPLUS
 CN 2-Piperidinecarbothioic acid, 1-(oxophenylacetyl)-, S-(2-phenylethyl)
 ester (9CI) (CA INDEX NAME)

FILE



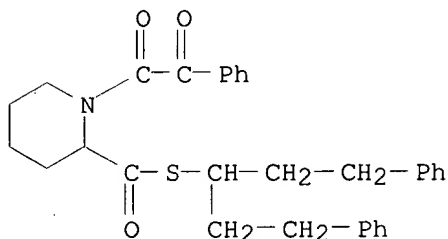
RN 205388-54-1 HCAPLUS

CN 2-Piperidinecarbothioic acid, 1-(oxophenylacetyl)-, S-[3-(4-methoxyphenyl)propyl] ester (9CI) (CA INDEX NAME)



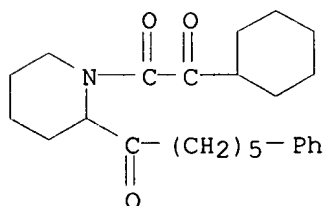
RN 217179-50-5 HCAPLUS

CN 2-Piperidinecarbothioic acid, 1-(oxophenylacetyl)-, S-[3-phenyl-1-(2-phenylethyl)propyl] ester (9CI) (CA INDEX NAME)



RN 217180-90-0 HCAPLUS

CN Piperidine, 1-(cyclohexyloxoacetyl)-2-(1-oxo-6-phenylhexyl)- (9CI) (CA INDEX NAME)



L15 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:738370 HCAPLUS

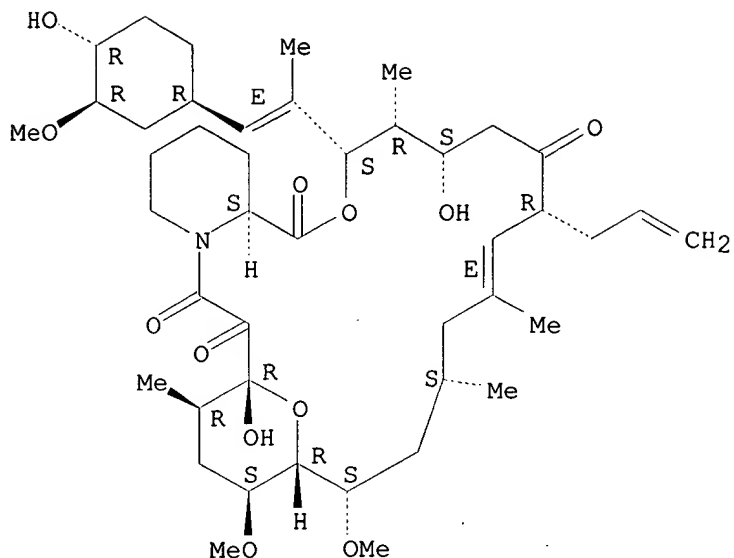
DN 128:43577

TI Topical FK506: a potent immunotherapy for alopecia areata? Studies using the Dundee experimental bald rat model

KATHLEEN FULLER EIC1700 308-4290

AU Mcelwee, K. J.; Rushton, D. H.; Trachy, R.; Oliver, R. F.
 CS Department of Biological Sciences, University of Dundee, Dundee, DD1 4HN,
 UK
 SO Br. J. Dermatol. (1997), 137(4), 491-497
 CODEN: BJDEAZ; ISSN: 0007-0963
 PB Blackwell
 DT Journal
 LA English
 CC 1-7 (Pharmacology)
 AB We elected to examine the efficacy of the topically applied
 immunosuppressive agent FK506 (Prograf) in the treatment of alopecia
 areata (AA) using the Dundee exptl. bald rat (DEBR) model. Thirty
 lesional DEBR rats were allocated to five groups of six. Group I rats
 received 0.1 mL of a 0.25% soln. of FK506 within a 2.times.2 cm marked
 area on one bald flank twice a week (125 .mu.g FK506/cm2 per wk) for 8 wk,
 while the contralateral flank was left untreated. In group II, 0.05 mL of
 a 0.1% soln. of FK506 was applied 5 days per wk on one flank (62.5 .mu.g
 FK506/cm2 per wk) and control vehicle to the opposite flank for 8 wk.
 Group III rats were treated as in group II except that drug and vehicle
 were applied twice a week (25 .mu.g FK506/cm2 per wk) for 4 wk. A pos.
 control group received orally administered cyclosporin A (CsA) (10 mg/kg
 daily) for 8 wk and a further group was left untreated. Rats were
 regularly examd. and photographed with skin biopsies taken from groups II
 and III. All FK506-treated rats regrew hair at the site of drug
 application within 14-21 days. Growth continued for 3 wk beyond
 termination of treatment after which gradual hair loss was obsd. No hair
 growth was seen as a result of vehicle application and hair loss continued
 on untreated areas and in the untreated control group. Immunohistol.
 revealed a drastic redn. in the follicular inflammatory infiltrate at the
 site of the FK506 application. The oral CsA group responded by
 simultaneous regrowth of hair over the whole body. Our findings suggest
 that FK506 may have considerable potential as a topical treatment for AA.
 ST FK506 topical alopecia areata
 IT Alopecia
 (areata; topical FK506 for treatment of alopecia areata)
 IT Immunosuppressants
 Topical drug delivery systems
 (topical FK506 for treatment of alopecia areata)
 IT 104987-11-3, FK506
 RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or
 effector, except adverse); THU (Therapeutic use); BIOL (Biological study);
 USES (Uses)
 (topical FK506 for treatment of alopecia areata)
 IT 104987-11-3, FK506
 RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or
 effector, except adverse); THU (Therapeutic use); BIOL (Biological study);
 USES (Uses)
 (topical FK506 for treatment of alopecia areata)
 RN 104987-11-3 HCAPLUS
 CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-
 tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-
 dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-
 methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-,
 (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



L15 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:269212 HCAPLUS

DN 126:312233

TI Hair growth modulation by topical immunophilin ligands: induction of anagen, inhibition of massive catagen development, and relative protection from chemotherapy-induced alopecia

AU Maurer, Marcus; Handjiski, Bori; Paus, Ralf

CS Department of Dermatology, Charite Hospital, Humboldt-Universitat zu Berlin, Berlin, D-10117, Germany

SO Am. J. Pathol. (1997), 150(4), 1433-1441

CODEN: AJPA44; ISSN: 0002-9440

PB American Society for Investigative Pathology

DT Journal

LA English

CC 1-12 (Pharmacology)

AB Selected immunophilin ligands (IPLs) are not only potent immunosuppressants but also modulate hair growth. Their considerable side effects, however, justify at best topical applications of these drugs for the management of clin. hair growth disorders. Therefore, the authors have explored hair growth manipulation by topical cyclosporin A (CsA) and FK 506 in previously established murine models that mimic premature hair follicle regression (catagen) or chemotherapy-induced alopecia, two major pathomechanisms underlying human hair loss. The authors confirm that topical CsA and FK 506 induce active hair growth (anagen) in the back skin of C57BL/6 mice with all follicles in the resting stage (telogen) and show that both IPLs also inhibit massive, dexamethasone-induced, premature catagen development in these mice. Furthermore, the authors demonstrate that CsA and FK 506 provide relative protection from alopecia and follicle dystrophy induced by cyclophosphamide, possibly by favoring the dystrophic anagen pathway of follicle response to chem. damage. Although it remains to be established whether these IPLs exert the same effects on human hair follicles, the authors study provides proof of the principle that topical IPLs can act as potent manipulators of clin. relevant hair-cycling pathomechanisms. This strongly encourages one to explore the use of topical IPLs in the management of human hair growth disorders.

ST hair growth stimulation topical immunophilin ligand; chemotherapy alopecia prevention topical immunophilin ligand; cyclosporin A hair growth stimulation; FK506 hair growth stimulation

IT Alopecia

Antitumor agents

KATHLEEN FULLER EIC1700 308-4290

Hair growth stimulants

(hair growth modulation by topical immunophilin ligands cyclosporin A and FK 506 in relation to induction of anagen and inhibition of massive catagen development and relative protection from chemotherapy-induced alopecia)

IT Immunophilins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (ligands; hair growth modulation by topical immunophilin ligands cyclosporin A and FK 506 in relation to induction of anagen and inhibition of massive catagen development and relative protection from chemotherapy-induced alopecia)

IT 50-18-0, Cyclophosphamide

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (hair growth modulation by topical immunophilin ligands cyclosporin A and FK 506 in relation to induction of anagen and inhibition of massive catagen development and relative protection from chemotherapy-induced alopecia)

IT 59865-13-3, Cyclosporin A 104987-11-3, FK506

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (hair growth modulation by topical immunophilin ligands cyclosporin A and FK 506 in relation to induction of anagen and inhibition of massive catagen development and relative protection from chemotherapy-induced alopecia)

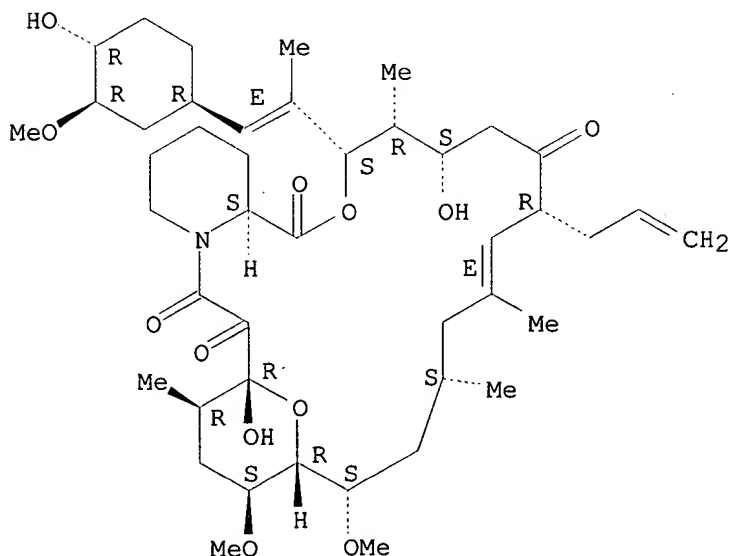
IT 104987-11-3, FK506

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (hair growth modulation by topical immunophilin ligands cyclosporin A and FK 506 in relation to induction of anagen and inhibition of massive catagen development and relative protection from chemotherapy-induced alopecia)

RN 104987-11-3 HCAPLUS

CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxazacyclotricosine-1,7,20,21(4H,23H)-tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-, (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

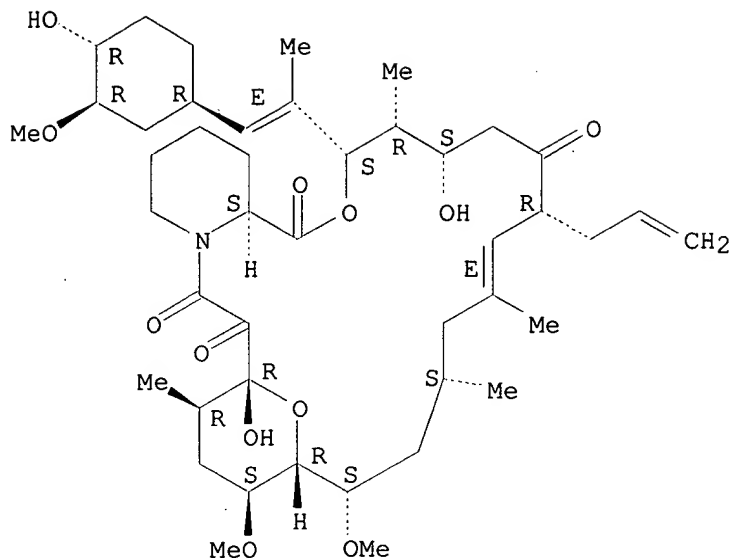
Absolute stereochemistry.
Double bond geometry as shown.



L15 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2001 ACS
 AN 1996:597898 HCAPLUS
 DN 125:238612
 TI Effects of potent immunotherapies, oral cyclosporin A and topical FK506 in the DEBR rat model for alopecia areata
 AU McElwee, K. J.; Lowe, J. G.; Oliver, R. F.
 CS Department Biomedical Sciences, University Dundee, UK
 SO Int. Congr. Ser. (1996), 1111 (Hair Research for the Next Millenium), 259-263
 CODEN: EXMDA4; ISSN: 0531-5131
 DT Journal
 LA English
 CC 1-12 (Pharmacology)
 Section cross-reference(s): 63
 AB The effect of immunosuppressant therapy with oral cyclosporin A and topical FK506 on alopecia areata was studied in the DEBR rat model.
 ST oral cyclosporin topical FK506 alopecia areata; immunosuppressant cyclosporin FK506 alopecia areata
 IT Immunosuppressants
 (immunosuppressant therapy with oral cyclosporin A and topical FK506 effect on alopecia areata in DEBR rat model)
 IT Alopecia
 (areata, immunosuppressant therapy with oral cyclosporin A and topical FK506 effect on alopecia areata in DEBR rat model)
 IT Pharmaceutical dosage forms
 (topical, FK506; immunosuppressant therapy with oral cyclosporin A and topical FK506 effect on alopecia areata in DEBR rat model)
 IT 59865-13-3, Cyclosporin A 104987-11-3, FK506
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (immunosuppressant therapy with oral cyclosporin A and topical FK506 effect on alopecia areata in DEBR rat model)
 IT 104987-11-3, FK506
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (immunosuppressant therapy with oral cyclosporin A and topical FK506 effect on alopecia areata in DEBR rat model)
 RN 104987-11-3 HCAPLUS
 CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-, (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

FILE



L15 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 1995:460554 HCAPLUS

DN 122:230322

TI Effects of immunosuppressive peptidyl-prolyl cis-trans isomerase (PPIase) inhibitors, cyclosporin A, FK506, ascomycin and rapamycin, on hair growth initiation in mouse: Immunosuppression is not required for new hair growth

AU Iwabuchi, Tokuro; Maruyama, Tadashi; Sei, Yoshihiro; Adachi, Kenji

CS Kamaishi Laboratories, Marine Biotechnology Institute, Kamaishi, 026, Japan

SO J. Dermatol. Sci. (1995), 9(1), 64-9

CODEN: JDSCEI; ISSN: 0923-1811

DT Journal

LA English

CC 1-7 (Pharmacology)

AB The effects of immunosuppressive peptidyl-prolyl cis-trans isomerase (PPIase) inhibitors, cyclosporin A, FK506, ascomycin and rapamycin, on hair growth initiation (anagen hair induction) in mouse were studied by topical application on the dorsal skin surface during the telogen phase of the hair cycle. Single applications of cyclosporin A and FK506 (10 to 100 nmol in 5 .mu.L of ethanol) induced new hair growth in 12 days within the restricted area where the compds. were applied. On the other hand, ascomycin and rapamycin did not initiate new anagen hairs even at higher doses (1 .mu.mol in 5 to 10 .mu.L of ethanol). The effects of simultaneous application of the immunosuppressants were also tested by a single topical application. Ascomycin did not inhibit the anagen hair induction by cyclosporin A, but inhibited hair induction by FK506. Rapamycin inhibited new hair growth induced by cyclosporin A and FK506. These results suggest that the inhibition of PPIase is not required for the initiation of a new hair cycle in mice, and that anagen hair induction caused by cyclosporin A and FK506 is not a result of immunosuppression. The present results also indicate that a single application of an adequate quantity of cyclosporin A and FK506 is sufficient to initiate new hair growth.

ST immunosuppressant peptidylprolyl isomerase hair growth

IT Hair

Immunosuppressants

(immunosuppressive peptidyl-prolyl cis-trans isomerase inhibitor effect on hair growth initiation)

IT 53123-88-9, Rapamycin 59865-13-3, Cyclosporin A

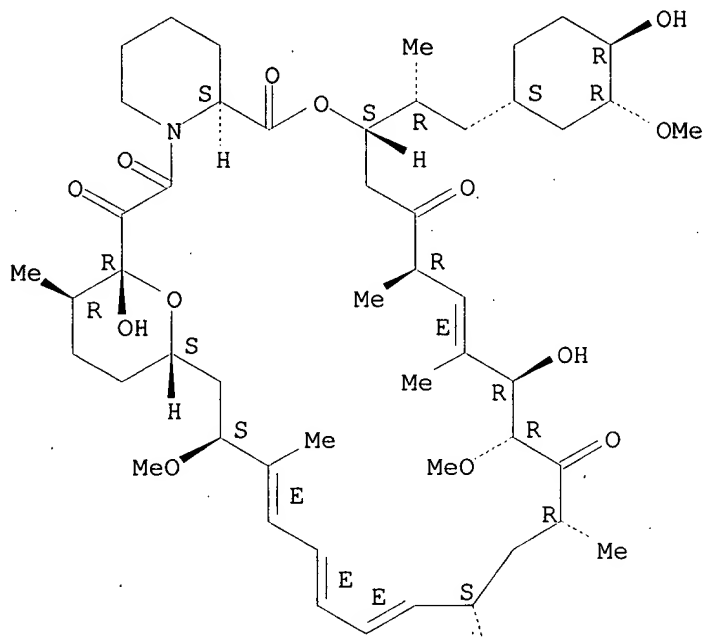
104987-11-3, FK506 104987-12-4, Ascomycin

KATHLEEN FULLER EIC1700 308-4290

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (immunosuppressive peptidyl-prolyl cis-trans isomerase inhibitor effect
 on **hair** growth initiation)
 IT 95076-93-0, Peptidyl-prolyl cis-trans isomerase
 RL: BAC (Biological activity or effector, except adverse); BIOL
 (Biological study)
 (immunosuppressive peptidyl-prolyl cis-trans isomerase inhibitor effect
 on hair growth initiation)
 IT 53123-88-9, Rapamycin 104987-11-3, FK506
 104987-12-4, Ascomycin
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (immunosuppressive peptidyl-prolyl cis-trans isomerase inhibitor effect
 on **hair** growth initiation)
 RN 53123-88-9 HCAPLUS
 CN Rapamycin (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

PAGE 1-A

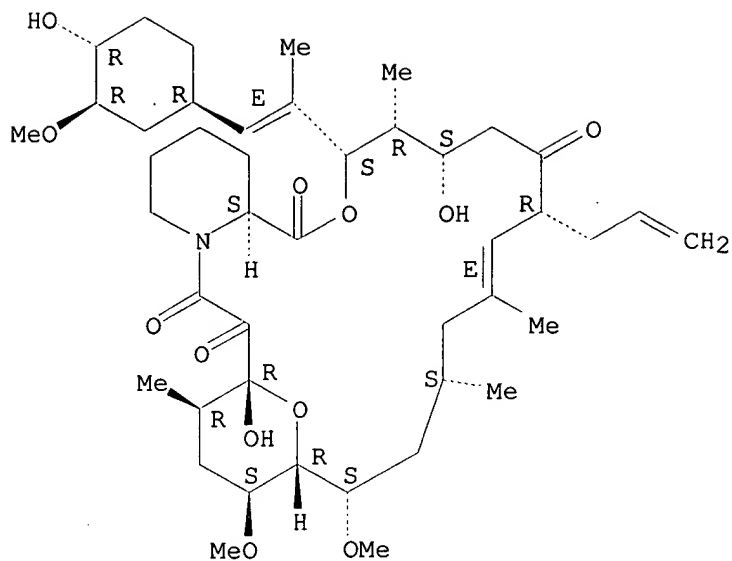


PAGE 2-A

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RN 104987-11-3 HCAPLUS
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 tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-
 dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-
 methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-,
 (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

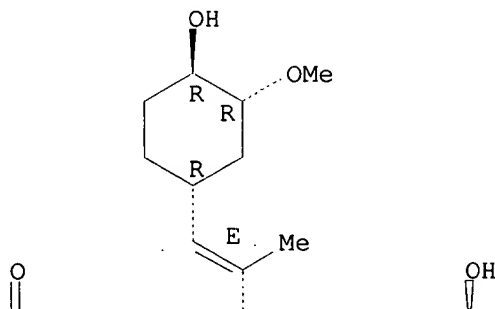
Absolute stereochemistry.
 Double bond geometry as shown.



RN 104987-12-4 HCAPLUS
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 tetrone, 8-ethyl-5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-
 hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-
 methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-
 , (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as described by E or Z.

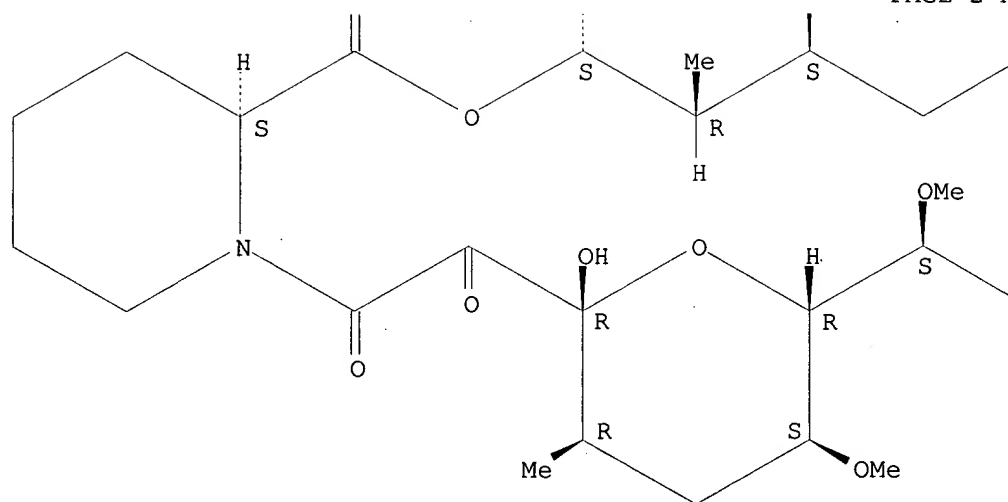
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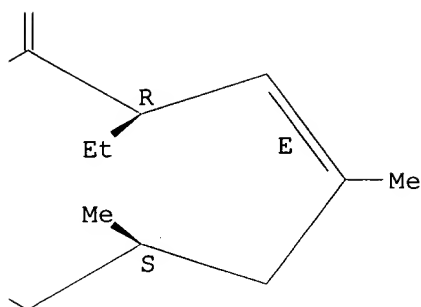
PA



D



PAGE 2-B



L15 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2001 ACS
 AN 1994:644746 HCAPLUS
 DN 121:244746
 TI Hair growth-stimulating effects of cyclosporin A and FK506, potent immunosuppressants
 AU Yamamoto, Satoshi; Kato, Ryuichi
 CS Sch. Med., Keio Univ., Tokyo, 160, Japan
 SO J. Dermatol. Sci. (1994), 7(Suppl.), S47-S54
 CODEN: JDSCEI; ISSN: 0923-1811
 DT Journal; General Review
 LA English
 CC 1-0 (Pharmacology)
 AB A review with 87 refs. Cyclosporin A (CsA), a cyclic endecapeptide, is a T cell-specific immunosuppressant and is successfully used in the field of organ transplantation. Another T cell-specific immunosuppressant, FK506, a more recently discovered macrolide antibiotic, is effective against graft rejection at much lower doses than CsA. Although totally different in structure, both compds. inhibit T cell activation by interfering with the prodn. of interleukin-2 (IL-2) by inhibiting IL-2 gene expression, probably through the inhibition of calcineurin, a Ca²⁺/calmodulin-dependent phosphatase. Clin. studies have revealed that FK506 induces a variety of side effects in common with CsA. One of the most common side effects of CsA is hypertrichosis. The hair growth stimulating effect of CsA is obsd. not only in normal but also in pathol. conditions of hair growth, i.e. in patients with alopecia areata and also in some patients with male-pattern alopecia. Although hypertrichosis is induced by both topical and oral administration of CsA, there has been no report showing that FK506 induces hypertrichosis. Recently we have found that topical application of FK506 to skins of mice, rats and hamsters markedly stimulates hair growth. This hair growth stimulating effect of FK506 is obsd. when applied topically but not by oral administration, even with a dose which causes marked immunosuppression. The hair growth stimulating effect of FK506 in normal animals may apparently be unrelated to its immunosuppressive effect. In vitro studies revealed that FK506 directly stimulates hair follicles. Mechanisms of hair growth stimulating effects of FK506 and CsA remain to be elucidated. Although at present it is not clear whether FK506 stimulates hair growth in humans, potential use of FK506 for therapeutic purposes as a stimulate of hair growth is anticipated.

ST review hair growth cyclosporin FK506 immunosuppressant
 IT Hair
 Hirsutism
 Immunosuppressants
 (hair growth-stimulating effects of immunosuppressants cyclosporin A and FK506)

IT 59865-13-3, Cyclosporin A 104987-11-3, FK506
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 KATHLEEN FULLER EIC1700 308-4290

(hair growth-stimulating effects of immunosuppressants
cyclosporin A and FK506)

IT 104987-11-3, FK506

RL: BAC (Biological activity or effector, except adverse); THU
(Therapeutic use); BIOL (Biological study); USES (Uses)

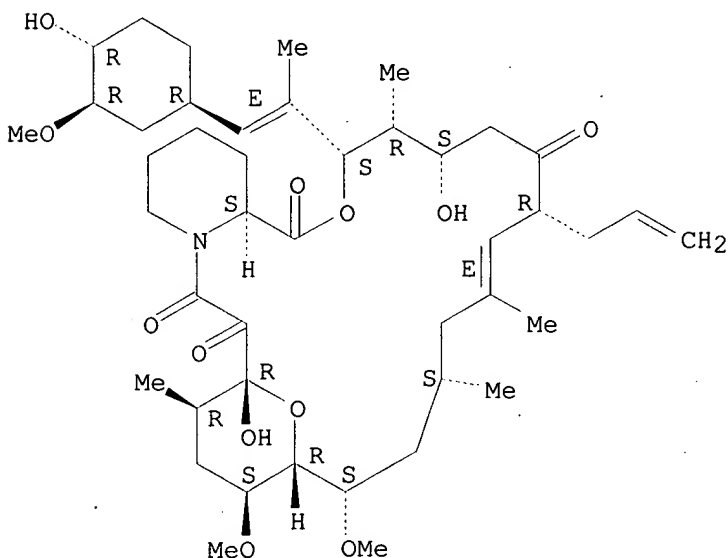
(hair growth-stimulating effects of immunosuppressants
cyclosporin A and FK506)

RN 104987-11-3 HCAPLUS

CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-
tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-
dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-
methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-,
(3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



L15 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 1994:260813 HCAPLUS

DN 120:260813

TI Stimulation of hair growth by topical application of FK506, a potent
immunosuppressive agent

AU Yamamoto, Satoshi; Jiang, Hong; Kato, Ryuichi

CS Sch. Med., Keio Univ., Tokyo, 160, Japan

SO J. Invest. Dermatol. (1994), 102(2), 160-4

CODEN: JIDEAE; ISSN: 0022-202X

DT Journal

LA English

CC 1-7 (Pharmacology)

AB FK506, a macrolide antibiotic produced by *Streptomyces tsukubaensis*, is known as a potent T cell - specific immunosuppressant, and is effective against graft rejection after organ transplantation. Topical application of FK506 (0.03-1 μmol) to dorsal skin of CD-1 mice stimulated hair growth in a dose-dependent manner. Unlike topical application, oral administration of 30 mg/kg of FK506, a dose that induces marked immunosuppression, did not stimulate significant hair growth. Topical application of FK506 also stimulated hair growth of rats and Syrian golden hamsters. FK506 stimulated hair growth even in SCID mice that lack both B- and T-cell immunity. Therefore, it is unlikely that the hair growth stimulatory effect of FK506 results from its immunosuppressant effect. FK506 (0.01-1 μM) stimulated both [^3H]thymidine and [^3H]glycine uptakes

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to cultured mouse vibrissae follicles in a concn.-dependent manner. Moreover, when the follicles were treated with FK506 (1 .mu.M) for 16 d, the size of the follicles (length of hair plus follicle) increased slightly but significantly. The size of the non-treated follicles did not increase significantly. These results indicate that FK506 directly stimulates hair follicles. Long-term treatment of mice with FK506, i.e., topical application of 1 .mu.mol FK506 twice a week for 6 mo, did not affect body wt. gain of mice, and the FK506-treated mice looked healthy. FK506 may be useful as a stimulant of hair growth.

ST hair growth stimulation FK506 topical administration
IT Hair
(growth of, FK506 topical administration stimulation of)

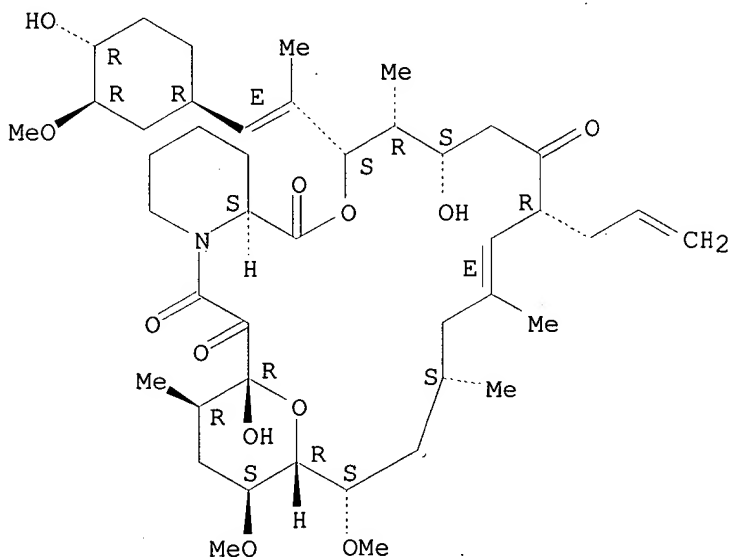
IT 104987-11-3, FK506
RL: BIOL (Biological study)
(hair growth stimulation by topical administration of)

IT 104987-11-3, FK506
RL: BIOL (Biological study)
(hair growth stimulation by topical administration of)

RN 104987-11-3 HCAPLUS

CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-, (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L15 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 1992:75962 HCAPLUS

DN 116:75962

TI Differential effects of FK 506 and cyclosporine on hair regrowth in the DEBR model of alopecia areata

AU Sainsbury, T. S. L.; Duncan, J. I.; Whiting, P. H.; Hewick, D. S.; Johnson, B. E.; Thomson, A. W.; Oliver, R. F.

CS Dep. Pathol., Univ. Aberdeen, Aberdeen, AB9 2ZD, UK

SO Transplant. Proc. (1991), 23(6), 3332-4

CODEN: TRPPA8; ISSN: 0041-1345

DT Journal

LA English

CC 1-7 (Pharmacology)

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AB In the Dundee exptl. bald rat (DEBR) model of alopecia areata, FK 506 appeared to be more toxic than CyA, was less effective in down-regulating the cutaneous inflammatory infiltrate, and was assocd. with only marginal hair growth. As yet, neither drug has been assessed topically in the DEBR. Undoubtedly, the topical application of an effective formulation of CyA or FK 506 for the treatment of alopecia areata would be desirable since drug-induced systemic toxicity could be minimized.

ST alopecia cyclosporin FK506 hair growth

IT Immunosuppressants
(hair regrowth response to, in Dundee exptl. bald rat model of alopecia areata)

IT Alopecia
(areata, cyclosporin A and FK506 effect on hair regrowth and Dundee exptl. bald rat model of)

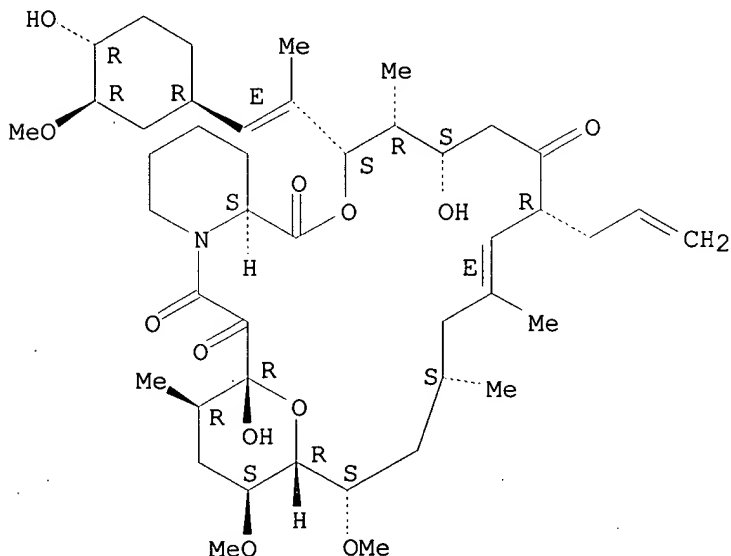
IT 59865-13-3, Cyclosporin A 104987-11-3, FK506
RL: BIOL (Biological study)
(hair regrowth response to, in Dundee exptl. bald rat model of alopecia areata)

IT 104987-11-3, FK506
RL: BIOL (Biological study)
(hair regrowth response to, in Dundee exptl. bald rat model of alopecia areata)

RN 104987-11-3 HCAPLUS

CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-, (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L15 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2001 ACS

AN 1991:520057 HCAPLUS

DN 115:120057

TI Hair growth stimulant compositions containing tricyclic compounds

IN Honbo, Toshiyasu; Hata, Takehisa; Ishino, Akihiro; Tsuji, Yoshiharu

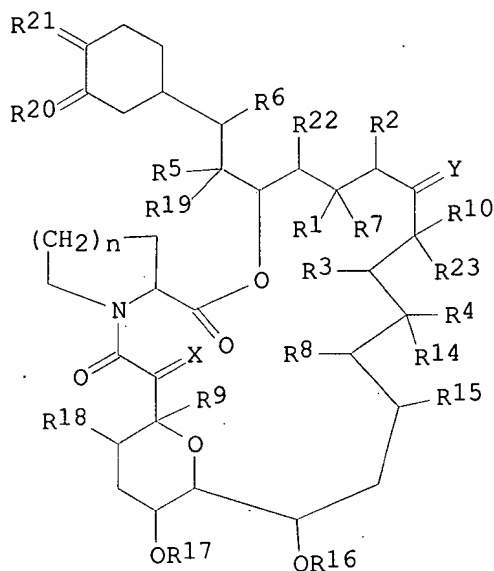
PA Fujisawa Pharmaceutical Co., Ltd., Japan

SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW

DT Patent

LA English
 IC ICM A61K007-06
 CC 63-6 (Pharmaceuticals)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 423714	A2	19910424	EP 1990-119814	19901016
	EP 423714	A3	19910703		
	EP 423714	B1	19940622		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CA 2027608	AA	19910417	CA 1990-2027608	19901015
	JP 03204807	A2	19910906	JP 1990-275285	19901016
	JP 2925285	B2	19990728		
	US 5215995	A	19930601	US 1992-863490	19920402
PRAI	JP 1989-266106		19891016		
	US 1990-595842		19901011		
OS	MARPAT 115:120057				
GI					



AB A hair growth stimulant compn. contains the tricyclic compds. [I; R1-6 = H, forms another bond with a C atom to which it is bonded (R2 may be an alkyl group); R7 = H, OH, alkoxy, etc.; R8-9 = H, OH; R10 = H, alkyl, etc.; X = oxo group or -CH2O-; Y = oxo group, HNR11R12, HOR13; R11-12 = H, alkyl, aryl, tosyl; R13-19, R22-23 = H or alkyl; R20-21 = oxo group or other defined groups; n = 1-3] or its pharmaceutically acceptable salts as active ingredient. I have excellent hair growth stimulant effect on male pattern alopecia and senile alopecia. A lotion contained 95% EtOH 80.0, FK-506 10.0, α -tocopherol acetate 0.01, ethoxylated hardened castor oil 0.5, purified water 9.0% and perfume and dye q.s. The lotion was coated once or twice/day, 5 mL each time, at a site of baldness or alopecia.

ST tricyclic compd hair growth stimulant; FK506 hair growth stimulant lotion; alopecia baldness tricyclic compd

IT Shampoos
 (FK-506 or related compds. in, as hair growth stimulants)

IT Hair preparations
 (creams, FK-506 or related compds. in, as hair growth stimulants)

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- IT Hair preparations
(growth stimulants, emulsions, FK-506 or related compds. in, as hair growth stimulants)
- IT Hair preparations
(liqs., FK-506 or related compds. in, as hair growth stimulants)
- IT Hair preparations
(lotions, FK-506 or related compds. in, as hair growth stimulants)
- IT Alopecia
(male pattern, treatment of, with hair growth stimulant prepn. contg. FK-506 and related tricyclic compds.)
- IT Alopecia
(senile, treatment of, with hair growth stimulant prepn. contg. FK-506 and related tricyclic compds.)
- IT Hair preparations
(tonics, FK-506 or related compds. in, as hair growth stimulants)
- IT 104987-11-3, FK-506
RL: BIOL (Biological study)
(hair growth stimulant prepn. contg., for treating male pattern **alopecia** or senile **alopecia**)
- IT 104987-11-3, FK-506
RL: BIOL (Biological study)
(hair growth stimulant prepn. contg., for treating male pattern **alopecia** or senile **alopecia**)
- RN 104987-11-3 HCAPLUS
- CN 15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-tetrone, 5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-, (3S,4R,5S,8R,9E,12S,14S,15R,16S,18R,19R,26aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

